STIC Search Report
Biotech-Chem Library

STIC Database Tracking Number: 147841

TO: Deborah Lambkin **Location: REM-5B09/5C18** **Monday, March 28, 2005** 1626 **Case Serial Number: 10/649761**	**From: Paul Schulwitz** **Location: Biotech-Chem Library** **REM-1A65** **Phone: 571-272-2527** **paul.schulwitz@uspto.gov**

Search Notes

14/1881

Access DB# _____

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Deborah Lambkin Examiner #: 71300 Date: 3/15/05
Art Unit: 1626 Phone Number 30 2-0698 Serial Number: 10/649,761
Mail Box and Bldg/Room Location: REM5B09 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

****

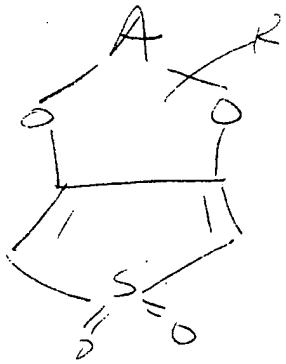
Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: 2-4-Alkylene dioxythiophene dioxide Compounds And Polymers

Inventors (please provide full names): BERT GROENENDAAL ET AL

Earliest Priority Filing Date: _____

***For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.**



A = alkyl
R = alkyl, cycloalkyl, alkoxy, aryl or polyethylene oxide

See Attached Claim Thanks Deborah

****

STAFF USE ONLY	Type of Search		Vendors and cost where applicable	
Searcher: _____	NA Sequence (#) _____		STN	7933 25
Searcher Phone #: _____	AA Sequence (#) _____		Dialog	_____
Searcher Location: _____	Structure (#)	1	Questel/Orbit	_____
Date Searcher Picked Up: _____	Bibliographic	_____	Dr.Link	_____
Date Completed: 3/27	Litigation	_____	Lexis/Nexis	_____
Searcher Prep & Review Time: 5	Fulltext	_____	Sequence Systems	_____
Clerical Prep Time: _____	Patent Family	_____	WWW/Internet	_____
Online Time: 5	Other	_____	Other (specify)	_____

PTO-1590 (8-01)

STIC SEARCH RESULTS FEEDBACK FORM

Biotech-Chem Library

Questions about the scope or the results of the search? Contact ***the searcher or contact***:

Mary Hale, Information Branch Supervisor
Remsen Bldg. 01 D86
571-272-2507

Voluntary Results Feedback Form

- *I am an examiner in Workgroup:* ☐ *Example: 1610*
- *Relevant prior art **found**, search results used as follows:*
  - ☐ 102 rejection
  - ☐ 103 rejection
  - ☐ Cited as being of interest.
  - ☐ Helped examiner better understand the invention.
  - ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

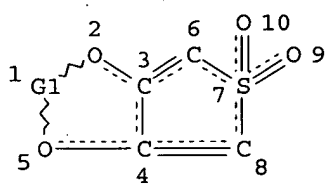
- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature
  (journal articles, conference proceedings, new product announcements etc.)

- *Relevant prior art **not found**:*
  - ☐ Results verified the lack of relevant prior art (helped determine patentability).
  - ☐ Results were not useful in determining patentability or understanding the invention.

Comments:

Drop off or send completed forms to STIC-Biotech-Chem Library Remsen Bldg.

=> d que l4
L1 STR



REP G1=(1-5) C
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE
L3 36 SEA FILE=REGISTRY SSS FUL L1
L4 25 SEA FILE=HCAPLUS ABB=ON PLU=ON L3

=> d l4 ibib abs hitstr 1-25

L4 ANSWER 1 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:203838 HCAPLUS
DOCUMENT NUMBER: 140:262410
TITLE: Method of forming a conductive film containing 3,4-alkylenedioxythiophenedioxide compounds and polymers
INVENTOR(S): Groenendaal, Bert; Louwet, Frank; Andriessen, Hieronymus
PATENT ASSIGNEE(S): Agfa-Gevaert, Belg.
SOURCE: PCT Int. Appl., 37 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 2004020444	A1	20040311	WO 2002-EP9887		20020902
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW					
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG					
US 2004097741	A1	20040520	US 2003-649761		20030827
PRIORITY APPLN. INFO.:			WO 2002-EP9887	A	20020902
			US 2002-418640P	P	20021015

OTHER SOURCE(S): MARPAT 140:262410

AB The invention relates to a method of forming a conductive film containing 3,4-alkylenedioxythiophenedioxide compds. and polymers, where the material offers reduced cross-talk in organic electroluminescent devices. The preparation process consists of the steps of (i) providing a solution of a polyanion; (ii) adding a 3,4-alkylenedioxythiophenedioxide compound and a thiophene or pyrrole compound to the polyanion solution; and (iii) adding an oxidizing or reducing system to the mixture

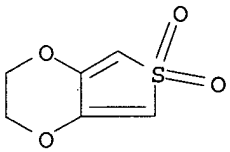
IT **669070-04-6P**
RL: POF (Polymer in formulation); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(method of forming conductive film containing 3,4-alkylenedioxythiophenedioxide compds. and polymers)

RN 669070-04-6 HCAPLUS

CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-, polymer with 2,3-dihydrothieno[3,4-b]-1,4-dioxin 6,6-dioxide (9CI) (CA INDEX NAME)

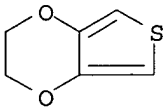
CM 1

CRN 669070-03-5
CMF C6 H6 O4 S



CM 2

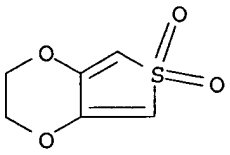
CRN 126213-50-1
CMF C6 H6 O2 S



IT **669070-03-5**
RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)
(method of forming conductive film containing 3,4-alkylenedioxythiophenedioxide compds. and polymers)

RN 669070-03-5 HCAPLUS

CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-, 6,6-dioxide (9CI) (CA INDEX NAME)

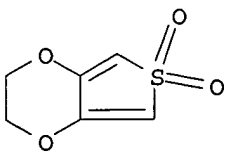


REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:188027 HCAPLUS
DOCUMENT NUMBER: 140:407475
TITLE: Light induced damage in poly(3,4-ethylenedioxythiophene) and its derivatives studied by photoelectron spectroscopy
AUTHOR(S): Marciniak, S.; Crispin, X.; Uvdal, K.; Trzcinski, M.; Birgerson, J.; Groenendaal, L.; Louwet, F.; Salaneck, W. R.
CORPORATE SOURCE: Department of Physics and Measurement Technology, Linkoping University, Linkoping, S-581 83, Swed.
SOURCE: Synthetic Metals (2004), 141(1-2), 67-73
CODEN: SYMEDZ; ISSN: 0379-6779
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Poly(3,4-ethylenedioxythiophene), usually known as PEDOT, and derivs. have attracted significant interest because of their high elec. conductivity This elec. property, however, deteriorates upon exposure to solar radiation. XPS has been used to study the UV-light-induced chemical changes in doped PEDOT, as well as in both neutral and doped forms of its alkylated derivative-PEDOT-C14H29. Anal. of the XPS data indicates an oxidation of the sulfur in the thiophene ring. Apparently, photo-oxidation leads to the formation of sulfon groups, SO2, resulting in a disruption of π-conjugation in PEDOT, which there by diminishes the conductivity of the organic layer. This hypothesis is supported by the results of a study of model mols. for pristine and the oxidized PEDOT unit: 3,4-ethylenedioxythiophene (EDOT) and 3,4-ethylenedioxythiophene S-dioxide (EDOT-SO2), resp.

IT **669070-03-5P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (model compound; light induced damage in poly(ethylenedioxythiophene) and its derivs. studied by photoelectron spectroscopy)
RN 669070-03-5 HCAPLUS
CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-, 6,6-dioxide (9CI) (CA INDEX NAME)

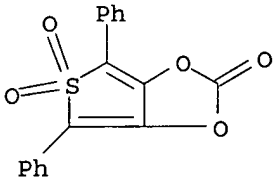


REFERENCE COUNT: 51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:347082 HCAPLUS
DOCUMENT NUMBER: 139:48450
TITLE: Predicting the Genotoxicity of Thiophene Derivatives from Molecular Structure
AUTHOR(S): Mosier, Philip D.; Jurs, Peter C.; Custer, Laura L.; Durham, Stephen K.; Pearl, Greg M.
CORPORATE SOURCE: Department of Chemistry, Pennsylvania State University, University Park, PA, 16802, USA
SOURCE: Chemical Research in Toxicology (2003), 16(6), 721-732
CODEN: CRTOEC; ISSN: 0893-228X
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB We report several binary classification models that directly link the genetic toxicity of a series of 140 thiophene derivs. with information derived from the compds.' mol. structure. Genetic toxicity was measured using an SOS Chromotest. IMAX (maximal SOS induction factor) values were recorded for each of the 140 compds. both in the presence and in the absence of S9 rat liver homogenate. Compds. were classified as genotoxic if IMAX ≥ 1.5 in either test or nongenotoxic if IMAX < 1.5 for both tests. The mol. structures were represented by numerical descriptors that encoded the topol., geometric, electronic, and polar surface area properties of the thiophene derivs. The classification models used were linear discriminant anal. (LDA), k-nearest neighbor classification (k-NN), and the probabilistic neural network (PNN). These were used in conjunction with either a genetic algorithm or a generalized simulated annealing to find optimal subsets of descriptors for each classifier. The quality of the resulting models was determined by the number of misclassified compds., with preference given to models that produced fewer false neg. classifications. Model sizes ranged from seven descriptors for LDA to three descriptors for k-NN and PNN. Very good classification results were obtained with all three classifiers. Classification rates for the LDA, k-NN, and PNN models were 80, 85, and 85%, resp., for the prediction set compds. Addnl., a consensus model was generated that incorporated all three of the basic model types. This consensus model correctly predicted the genotoxicity of 95% of the prediction set compds.

IT **54714-11-3**, 4,6-Diphenylthieno-[3,4-d]-1,3-dioxol-2-one 5,5-dioxide
RL: ADV (Adverse effect, including toxicity); PRP (Properties); BIOL (Biological study)
(predicting genotoxicity of thiophene derivs. from mol. structure)
RN 54714-11-3 HCAPLUS
CN Thieno[3,4-d]-1,3-dioxol-2-one, 4,6-diphenyl-, 5,5-dioxide (9CI) (CA INDEX NAME)



REFERENCE COUNT: 69 THERE ARE 69 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:942587 HCAPLUS
DOCUMENT NUMBER: 138:304877
TITLE: 3,4-Ethylenedioxy-substituted bithiophene-alt-thiophene-S,S-dioxide regular copolymers. Synthesis and conductive, magnetic and luminescence properties.
AUTHOR(S): Berlin, Anna; Zotti, Gianni; Zecchin, Sandro; Schiavon, Gilberto; Cocchi, Massimo; Virgili, Dalia; Sabatini, Cristiana
CORPORATE SOURCE: Istituto CNR di Scienze e Tecnologie Molecolari, Milan, 20133, Italy
SOURCE: Journal of Materials Chemistry (2003), 13(1), 27-33
CODEN: JMACEP; ISSN: 0959-9428
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English

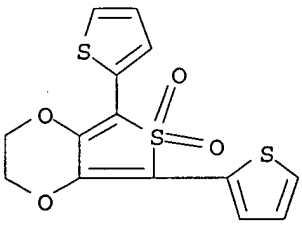
AB Polyconjugated regular bithiophene-alt-thiophene-S,S-dioxide copolymers were produced by anodic coupling of variously 3,4-ethylenedioxy-substituted 2,5-bis(2-thienyl)thiophene-S,S-dioxide. The polymers were characterized by cyclic voltammetry, FTIR reflection-absorption and UV-vis spectroscopy, MALDI-TOF mass spectroscopy, electrochem. quartz crystal microbalance, in situ ESR and in situ conductivity techniques, photo- and electro-luminescence measurements. The regular alternation of electron-rich and -poor thiophene rings in the polymer chain operated by the ethylenedioxy and S,S-dioxide moieties produces a finite window of conductivity Alkyl-protection of the β-positions of the thiophene-S,S-dioxide ring gave low-defect and soluble oligomers which were investigated in single-layer organic light-emitting devices (OLEDs). Photoluminescence quantum efficiency of .apprx.1% and external electroluminescence quantum efficiencies of 0.01% photon/electron at a luminance of 100 cd m-2 were obtained.

IT **511286-91-2P 511286-92-3P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and conductive, magnetic and luminescence properties of)

RN 511286-91-2 HCAPLUS
CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-5,7-di-2-thienyl-, 6,6-dioxide, homopolymer (9CI) (CA INDEX NAME)

CM 1

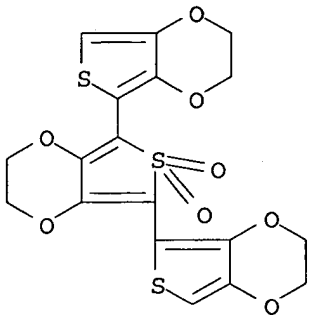
CRN 511286-84-3
CMF C14 H10 O4 S3



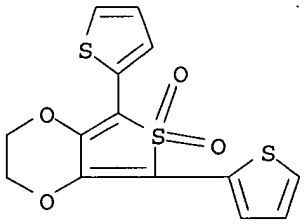
RN 511286-92-3 HCAPLUS
CN 5,5':7',5''-Terthieno[3,4-b]-1,4-dioxin, 2,2',2'',3,3',3''-hexahydro-, 6',6'-dioxide, homopolymer (9CI) (CA INDEX NAME)

CM 1

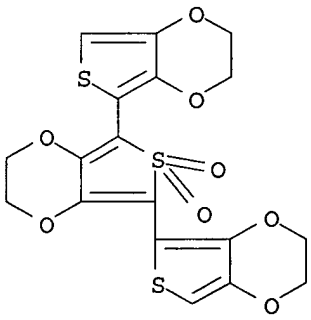
CRN 511286-85-4
CMF C18 H14 O8 S3



IT **511286-84-3P 511286-85-4P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and polymerization of)
RN 511286-84-3 HCAPLUS
CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-5,7-di-2-thienyl-, 6,6-dioxide (9CI) (CA INDEX NAME)

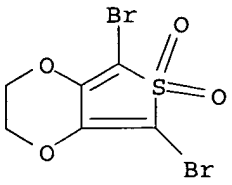


RN 511286-85-4 HCAPLUS
CN 5,5':7',5''-Terthieno[3,4-b]-1,4-dioxin, 2,2',2'',3,3',3''-hexahydro-, 6',6'-dioxide (9CI) (CA INDEX NAME)



IT **511286-87-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction with (tributylstannyl)thiophene)

RN 511286-87-6 HCAPLUS
CN Thieno[3,4-b]-1,4-dioxin, 5,7-dibromo-2,3-dihydro-, 6,6-dioxide (9CI) (CA INDEX NAME)

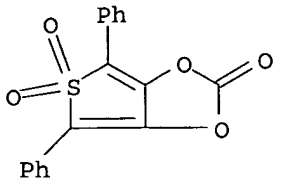


REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 5 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1998:129570 HCAPLUS
DOCUMENT NUMBER: 128:125467
TITLE: Preparation and Photoactivation of Caged Fluorophores and Caged Proteins Using a New Class of Heterobifunctional, Photocleavable Crosslinking Reagents
AUTHOR(S): Ottl, Johannes; Gabriel, Daniela; Marriott, Gerard
CORPORATE SOURCE: Biomolecular and Cellular Dynamics Research Group, Max Planck Institute for Biochemistry, Martinsried, 82152, Germany
SOURCE: Bioconjugate Chemistry (1998), 9(2), 143-151
CODEN: BCCHES; ISSN: 1043-1802
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The design, synthesis, and spectroscopic and chemical properties 4 members of a new class of heterobifunctional photocleavable (caged) crosslinking reagents were described. One of the 2 reactive groups of the crosslinker reacted with amino groups to form the corresponding photolabile carbamates. Amino group-containing compds. or proteins caged with these reagents can be coupled through the thiol reactive oxirane group of the crosslinker to a different biomol. or to a thiol-derivatized surface. The 3,4-dimethoxy-6-nitrophenyl photoisomerization group of the reagent was phys. and chemical isolated from the crosslinking functionality, and the high extinction coefficient and red-shifted action spectrum of this chromophore make it suitable for photoactivation applications of caged compds. on surfaces or in living cells. The bifunctional, photocleavable crosslinking reagents were used to prepare a thiol reactive caged rhodamine 110. The new reagents and conjugation procedures described may be used as part of a general procedure to cage the activity of proteins by phys. masking binding sites.

IT **54714-11-3**
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation and photoactivation of fluorophores and proteins by using photocleavable crosslinkers)
RN 54714-11-3 HCAPLUS
CN Thieno[3,4-d]-1,3-dioxol-2-one, 4,6-diphenyl-, 5,5-dioxide (9CI) (CA INDEX NAME)



REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

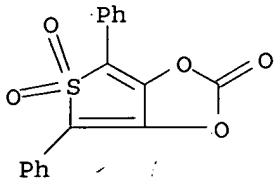
L4 ANSWER 6 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1996:631934 HCAPLUS
DOCUMENT NUMBER: 125:261249
TITLE: Photoresist having increased sensitivity and use
INVENTOR(S): Babich, Edward D.; Petrillo, Karen E.; Simons, John P.; Seeger, David E.
PATENT ASSIGNEE(S): International Business Machines Corp., USA
SOURCE: Eur. Pat. Appl., 15 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 727713	A1	19960821	EP 1996-100483	19960115
R: DE, FR, GB				
US 5593812	A	19970114	US 1995-389864	19950217
KR 187873	B1	19990601	KR 1996-2619	19960203
JP 08254822	A2	19961001	JP 1996-26719	19960214
JP 3125277	B2	20010115		
US 5753412	A	19980519	US 1996-659675	19960605
US 5770345	A	19980623	US 1996-680668	19960716
PRIORITY APPLN. INFO.:			US 1995-389864 A	19950217
OTHER SOURCE(S):	MARPAT 125:261249			

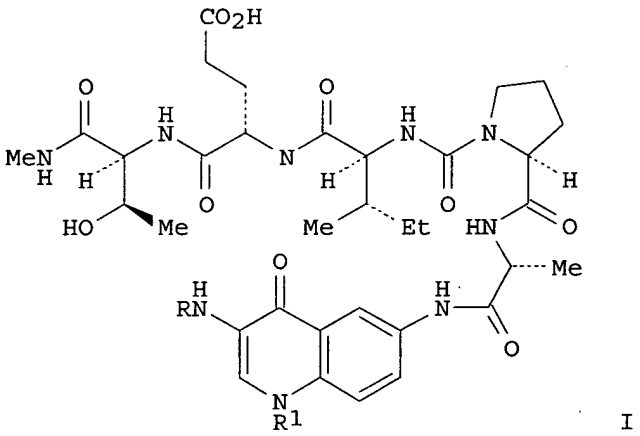
AB The sensitivity of a photoresist to actinic light is improved by the addition of certain dyes. The photoresist includes a polymer matrix, a photosensitive acid generator, and at least one compound selected from the group consisting of dyes containing at least one heterosulphur atom such as 2,2',5',2"-terthiophene, its derivs., thianthrene, its derivs., 4,6-diphenylthieno(3,4-d)-1,3-dioxol-2-one-5,5-dioxide, phenysulfone, and its derivs. and compds. such as 4,5-diphenyl-1,3-dioxol-2-one, 3,4-bis(acetoxymethyl)furan, chelidonic acid, its derivs., and 5,7,12,14-pentacenetetrone. Resist images on a substrate are formed from the photoresist.

IT **54714-11-3**
RL: TEM (Technical or engineered material use); USES (Uses)
(photoresists containing photosensitive acid generators and)

RN 54714-11-3 HCAPLUS
CN Thieno[3,4-d]-1,3-dioxol-2-one, 4,6-diphenyl-, 5,5-dioxide (9CI) (CA INDEX NAME)



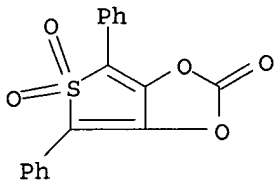
L4 ANSWER 7 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1996:108475 HCAPLUS
DOCUMENT NUMBER: 124:261696
TITLE: Design and synthesis of a β-strand inducer: application to ICAM-1/LFA-1 mediated cellular adhesion
AUTHOR(S): Michne, William F.; Schroeder, Joseph D.
CORPORATE SOURCE: Dep. Med. Chem., Sterling Winthrop Pharm. Res. Div., Collegeville, PA, USA
SOURCE: International Journal of Peptide & Protein Research (1996), 47(1/2), 2-8
CODEN: IJPPC3; ISSN: 0367-8377
PUBLISHER: Munksgaard
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I

AB The binding of lymphocyte function associated antigen (LFA-1) to intercellular adhesion mol. (ICAM-1) is responsible for several types of cellular adhesion. Amino acid substitution mutants of ICAM-1 have established the importance of several sequences in this protein. The authors selected the binding region of Glu34 for further study. One published model of domain 1 placed Glu34 near the end of a β-strand. The authors designed and synthesized tripeptide derivs. I (R = R1 = H; R = H, Ac, R1 = CH2CH:CH2) centered on the Glu34 sequence and attached a platform which, through hydrogen bonds, induces a rigid β-strand conformation. Variable temperature NMR methods coupled with NOESY 2-dimensional
NMR data enabled determination of the solution conformation of these compds.

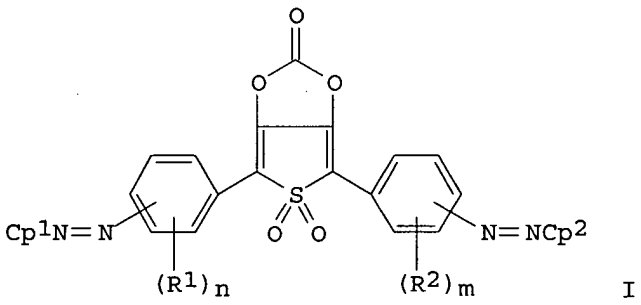
IT **54714-11-3**
RL: RCT (Reactant); RACT (Reactant or reagent)
(design and synthesis of urea tripeptide β-strand inducers and potential application to ICAM-1/LFA-1 mediated cellular adhesion)
RN 54714-11-3 HCAPLUS
CN Thieno[3,4-d]-1,3-dioxol-2-one, 4,6-diphenyl-, 5,5-dioxide (9CI) (CA INDEX NAME)



L4 ANSWER 8 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1993:29943 HCAPLUS
DOCUMENT NUMBER: 118:29943
TITLE: Electrophotographic photoreceptor
INVENTOR(S): Suzuki, Shinichi
PATENT ASSIGNEE(S): Konica Co., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 24 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04166848	A2	19920612	JP 1990-292992	19901030
PRIORITY APPLN. INFO.:			JP 1990-292992	19901030

GI

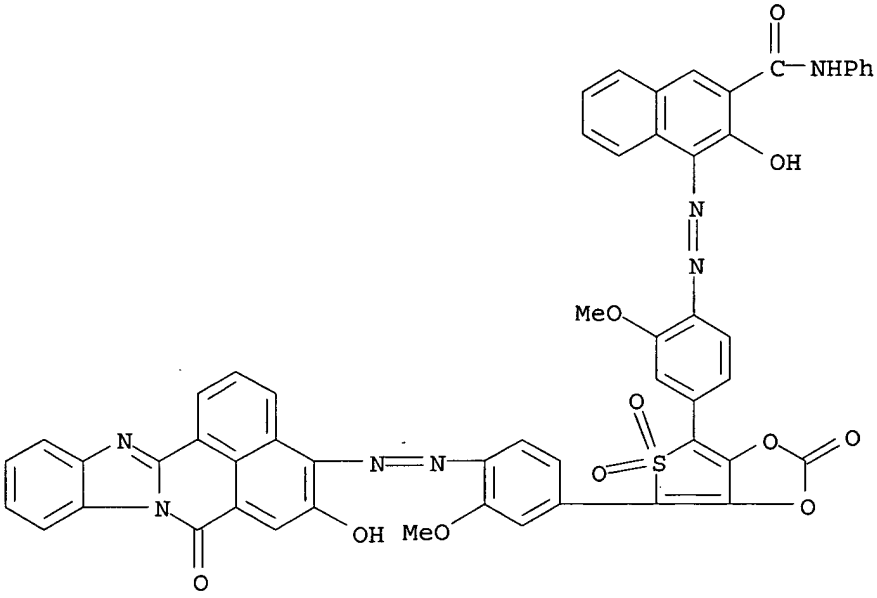


I

AB The title photoreceptor comprises an elec. conductive support having thereon a photosensitive layer containing a bisazo compound represented by general structure I. For I, Cp1, Cp2 = coupler residue containing phenolic OH; R1, R2 = substituent; n, m = 0 to 4. The title photoreceptor shows high sensitivity.
IT **145067-90-9 145067-91-0 145067-92-1**

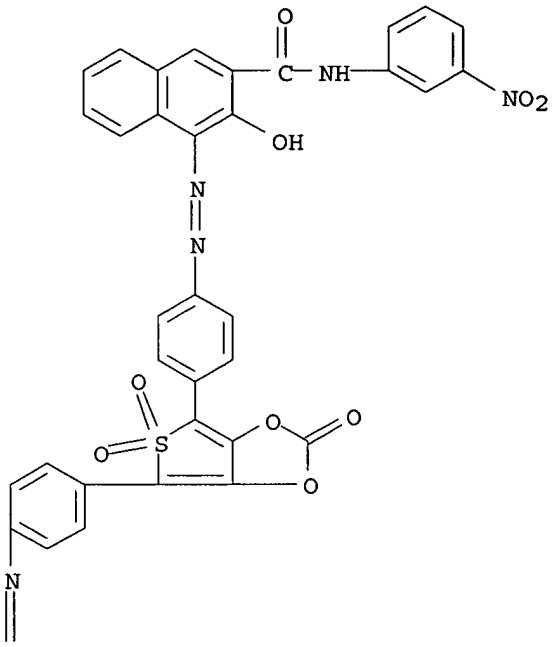
145067-93-2 145067-94-3 145067-95-4
145067-96-5 145067-97-6 145067-98-7
145067-99-8 145068-00-4 145068-01-5
145068-02-6 145068-03-7 145068-04-8
145068-05-9 145068-06-0 145068-07-1
145068-08-2 145068-09-3 145068-10-6
RL: USES (Uses)
(electrophotog. photoreceptor containing)

RN 145067-90-9 HCAPLUS
CN 2-Naphthalenecarboxamide, 3-hydroxy-4-[[4-[6-[4-[(5-hydroxy-7-oxo-7H-benzimidazo[2,1-a]benz[de]isoquinolin-4-yl)azo]-3-methoxyphenyl]-5,5-dioxido-2-oxothieno[3,4-d]-1,3-dioxol-4-yl]-2-methoxyphenyl]azo]-N-phenyl- (9CI) (CA INDEX NAME)



RN 145067-91-0 HCAPLUS
CN 2-Naphthalenecarboxamide, 4,4'-[(5,5-dioxido-2-oxothieno[3,4-d]-1,3-dioxole-4,6-diyl)bis(4,1-phenyleneazo)]bis[3-hydroxy-N-(3-nitrophenyl)- (9CI) (CA INDEX NAME)

PAGE 1-A



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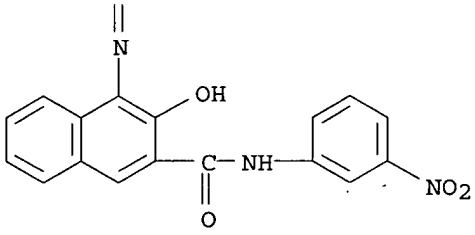
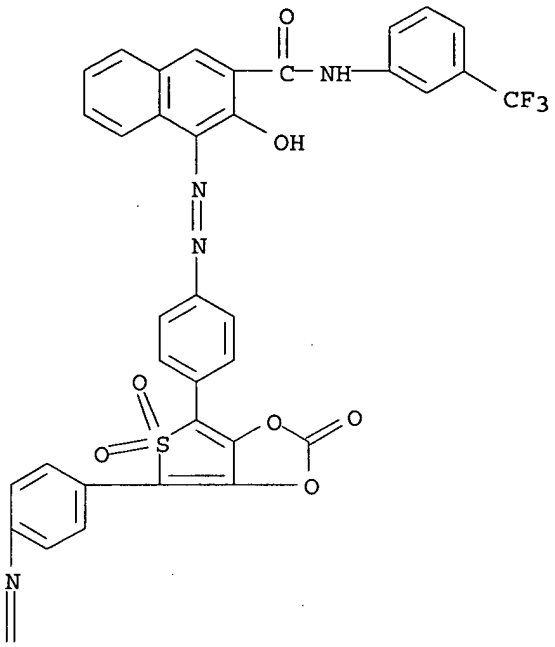
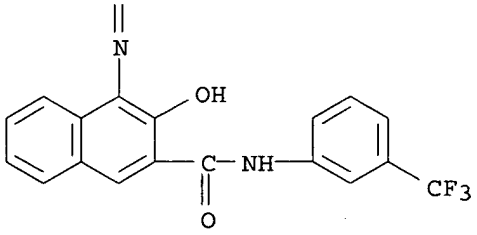


RN 145067-92-1 HCAPLUS
CN 2-Naphthalenecarboxamide, 4,4'-[(5,5-dioxido-2-oxothieno[3,4-d]-1,3-dioxole-4,6-diyl)bis(4,1-phenyleneazo)]bis[3-hydroxy-N-[3-(trifluoromethyl)phenyl]- (9CI) (CA INDEX NAME)

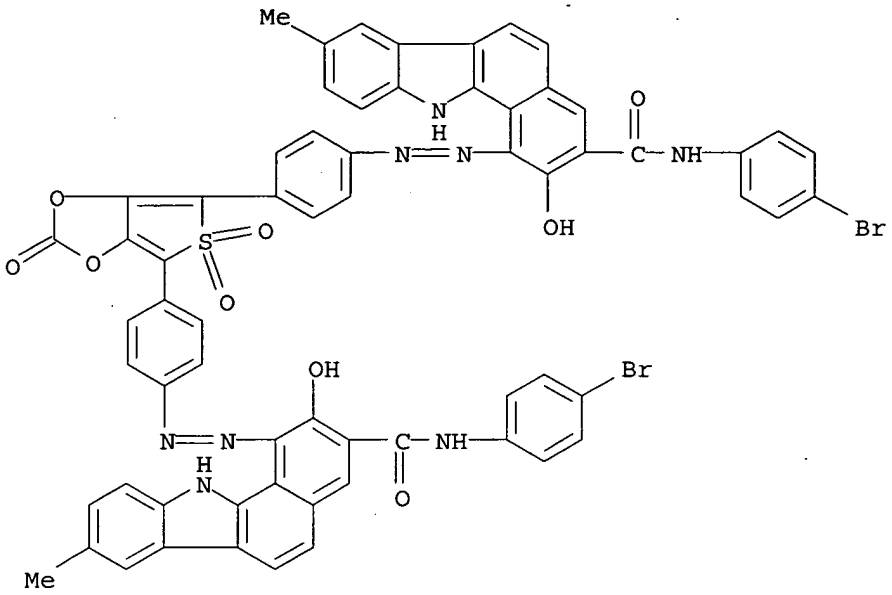
PAGE 1-A



PAGE 2-A

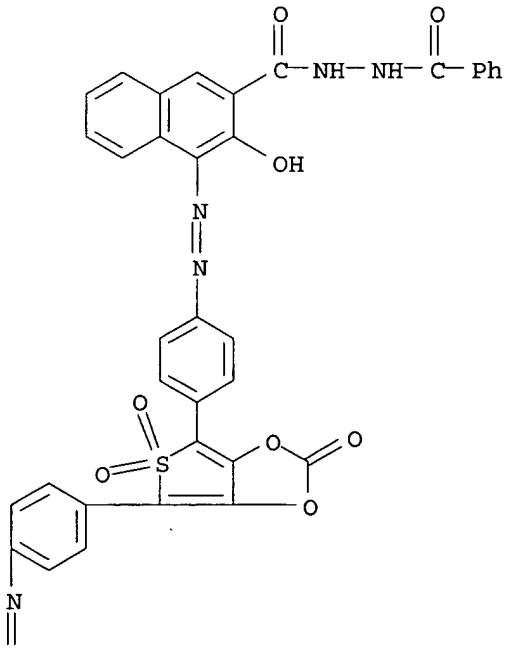


RN 145067-93-2 HCAPLUS
CN 11H-Benzo[a]carbazole-3-carboxamide, 1,1'-[(5,5-dioxido-2-oxothieno[3,4-d]-1,3-dioxole-4,6-diyl)bis(4,1-phenyleneazo)]bis[N-(4-bromophenyl)-2-hydroxy-8-methyl- (9CI) (CA INDEX NAME)



RN 145067-94-3 HCAPLUS
CN 2-Naphthalenecarboxylic acid, 4,4'-[(5,5-dioxido-2-oxothieno[3,4-d]-1,3-dioxole-4,6-diyl)bis(4,1-phenyleneazo)]bis[3-hydroxy-, bis(2-benzoylhydrazide) (9CI) (CA INDEX NAME)

PAGE 1-A



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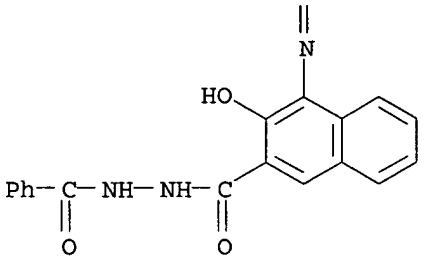
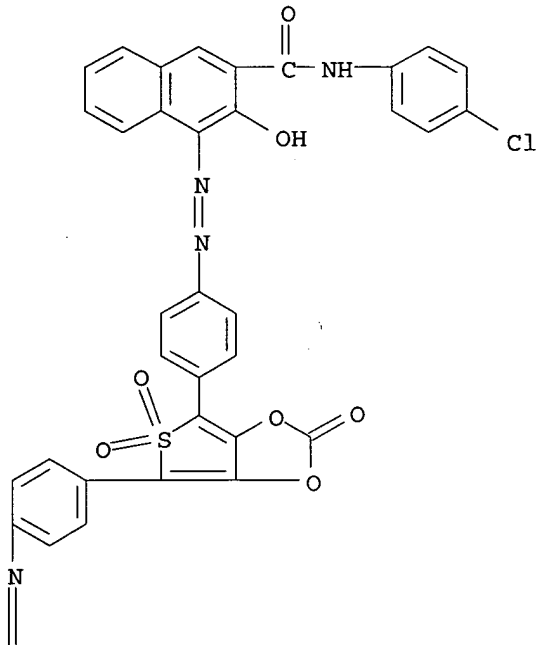


RN 145067-95-4 HCAPLUS
CN 2-Naphthalenecarboxamide, 4,4'-[(5,5-dioxido-2-oxothieno[3,4-d]-1,3-dioxole-4,6-diyl)bis(4,1-phenyleneazo)]bis[N-(4-chlorophenyl)-3-hydroxy-(9CI) (CA INDEX NAME)

PAGE 1-A



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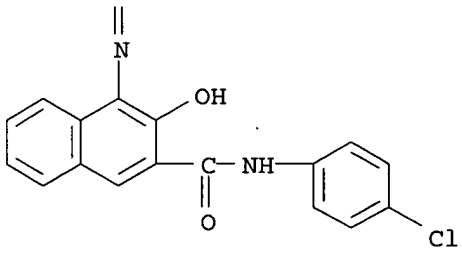
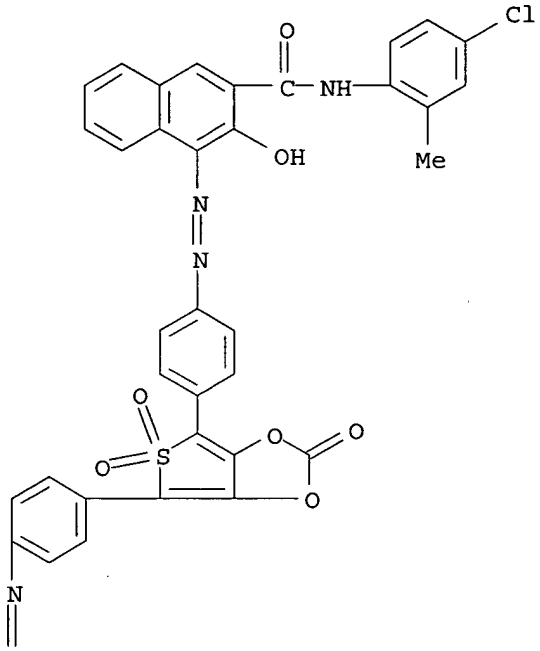


RN 145067-96-5 HCAPLUS
CN 2-Naphthalenecarboxamide, 4,4'-[(5,5-dioxido-2-oxothieno[3,4-d]-1,3-dioxole-4,6-diyl)bis(4,1-phenyleneazo)]bis[N-(4-chloro-2-methylphenyl)-3-hydroxy- (9CI) (CA INDEX NAME)

PAGE 1-A



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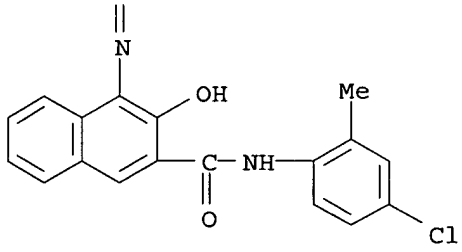
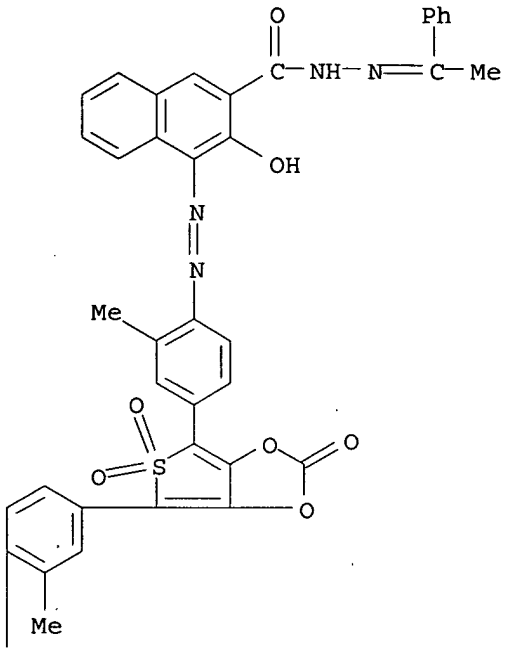


RN 145067-97-6 HCAPLUS
CN 2-Naphthalenecarboxylic acid, 4,4'-[(5,5-dioxido-2-oxothieno[3,4-d]-1,3-dioxole-4,6-diyl)bis[(2-methyl-4,1-phenylene)azo]]bis[3-hydroxy-, bis[(1-phenylethylidene)hydrazide] (9CI) (CA INDEX NAME)

PAGE 1-A



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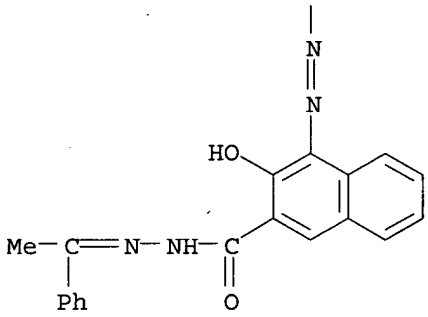
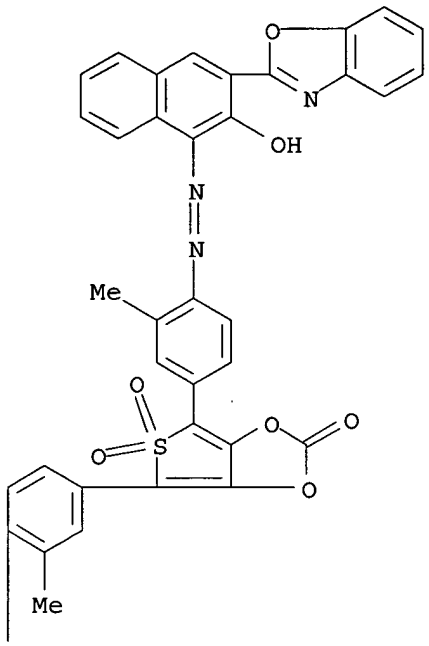


RN 145067-98-7 HCAPLUS
CN Thieno[3,4-d]-1,3-dioxol-2-one, 4,6-bis[4-[[3-(2-benzoxazolyl)-2-hydroxy-1-naphthalenyl]azo]-3-methylphenyl]-, 5,5-dioxide (9CI) (CA INDEX NAME)

PAGE 1-A



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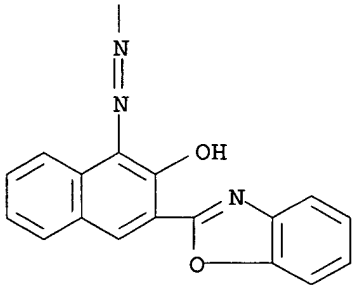
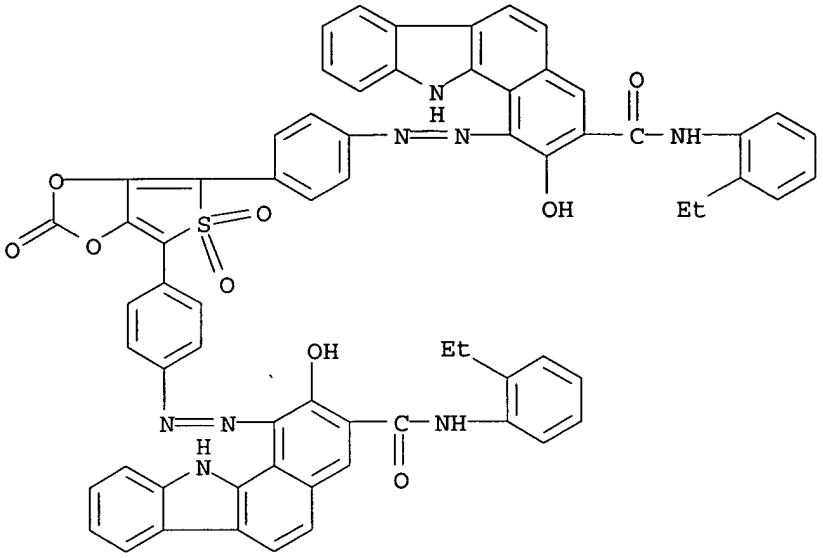
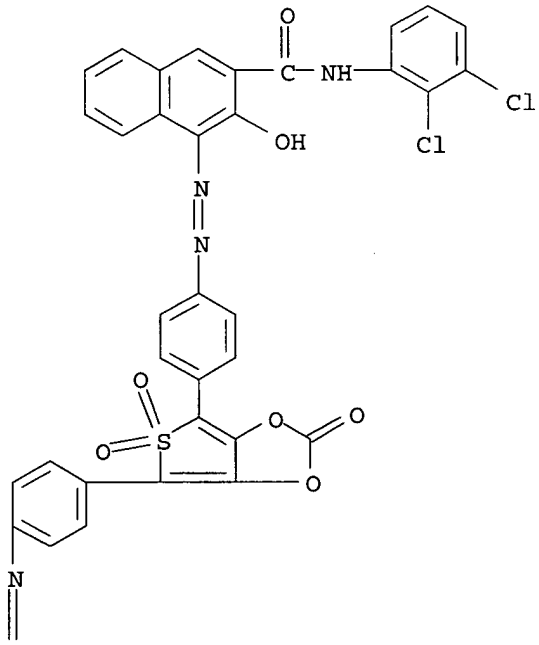


RN 145067-99-8 HCAPLUS
CN 11H-Benzo[a]carbazole-3-carboxamide, 1,1'-[(5,5-dioxido-2-oxothieno[3,4-d]-1,3-dioxole-4,6-diyl)bis(4,1-phenyleneazo)]bis[N-(2-ethylphenyl)-2-hydroxy- (9CI) (CA INDEX NAME)



RN 145068-00-4 HCAPLUS
CN 2-Naphthalenecarboxamide, 4,4'-[(5,5-dioxido-2-oxothieno[3,4-d]-1,3-dioxole-4,6-diyl)bis(4,1-phenyleneazo)]bis[N-(2,3-dichlorophenyl)-3-hydroxy- (9CI) (CA INDEX NAME)

PAGE 1-A



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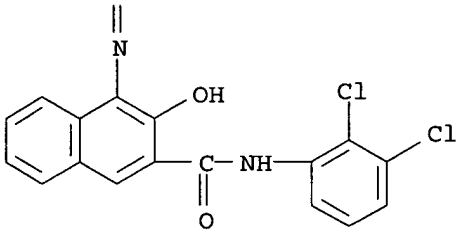

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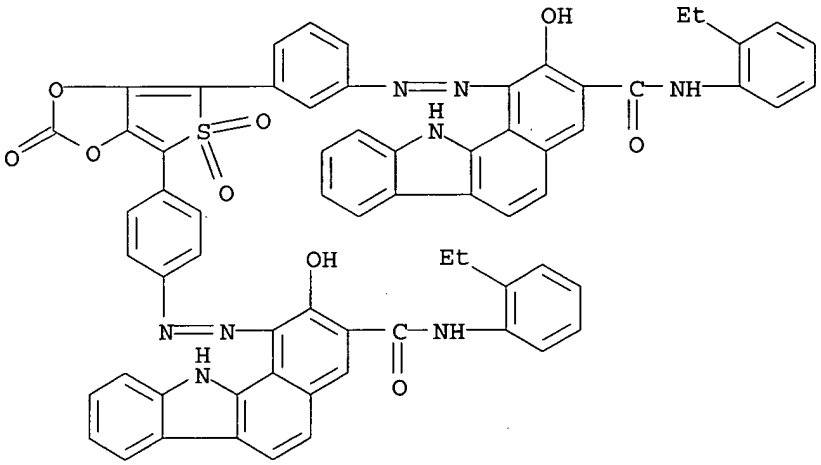
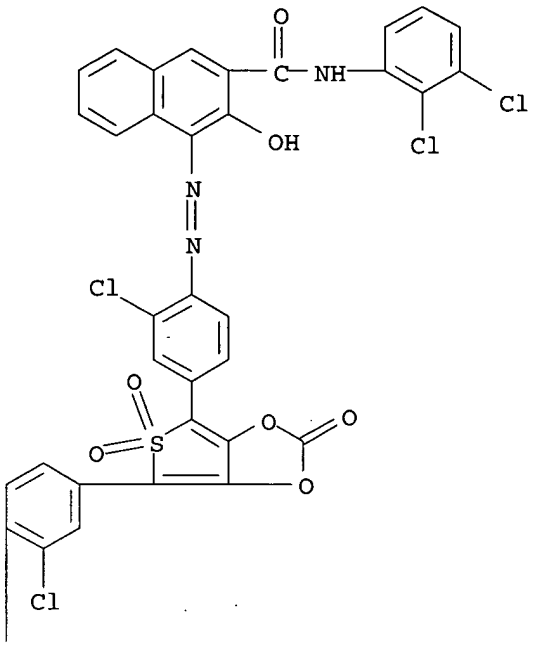
CN 11H-Benzo[a]carbazole-3-carboxamide, N-(2-ethylphenyl)-1-[[3-[6-[4-[[3-[[(2-ethylphenyl)amino]carbonyl]-2-hydroxy-11H-benzo[a]carbazol-1-yl]azo]phenyl]-5,5-dioxido-2-oxothieno[3,4-d]-1,3-dioxol-4-yl]phenyl]azo]-2-hydroxy- (9CI) (CA INDEX NAME)



RN 145068-02-6 HCAPLUS
CN 2-Naphthalenecarboxamide, 4,4'-[(5,5-dioxido-2-oxothieno[3,4-d]-1,3-dioxole-4,6-diyl)bis[(2-chloro-4,1-phenylene)azo]]bis[N-(2,3-dichlorophenyl)-3-hydroxy- (9CI) (CA INDEX NAME)

PAGE 1-A



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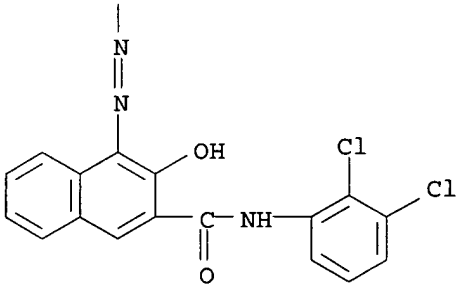

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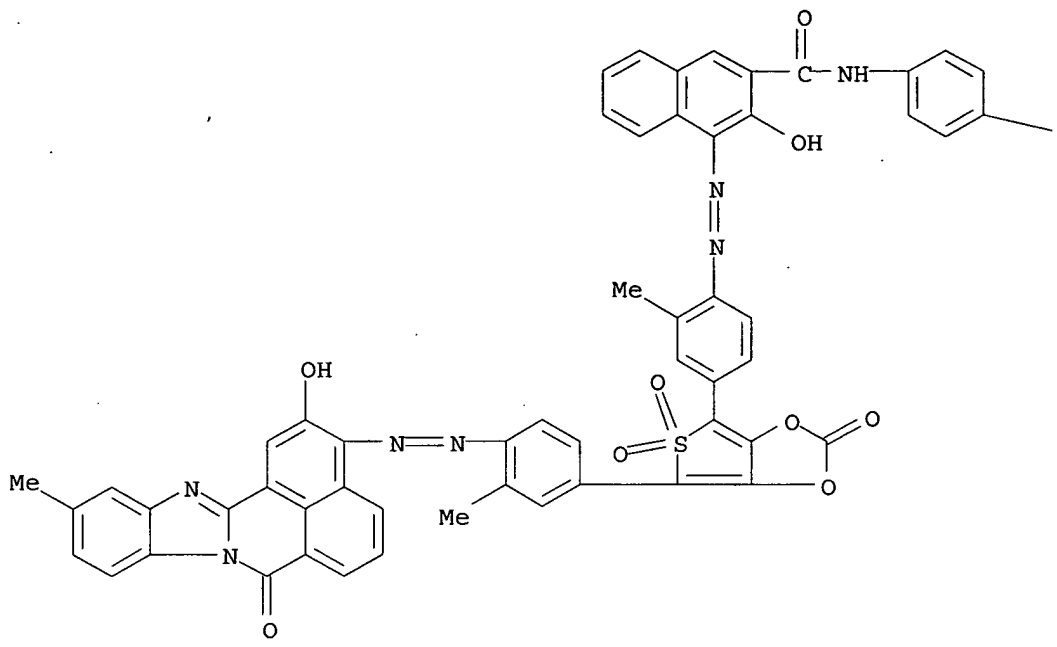
CN 2-Naphthalenecarboxamide, N-(4-cyanophenyl)-3-hydroxy-4-[[4-[6-[4-[(2-hydroxy-11-methyl-7-oxo-7H-benzimidazo[2,1-a]benz[de]isoquinolin-3-yl)azo]-3-methylphenyl]-5,5-dioxido-2-oxothieno[3,4-d]-1,3-dioxol-4-yl]-2-methylphenyl]azo]- (9CI) (CA INDEX NAME)

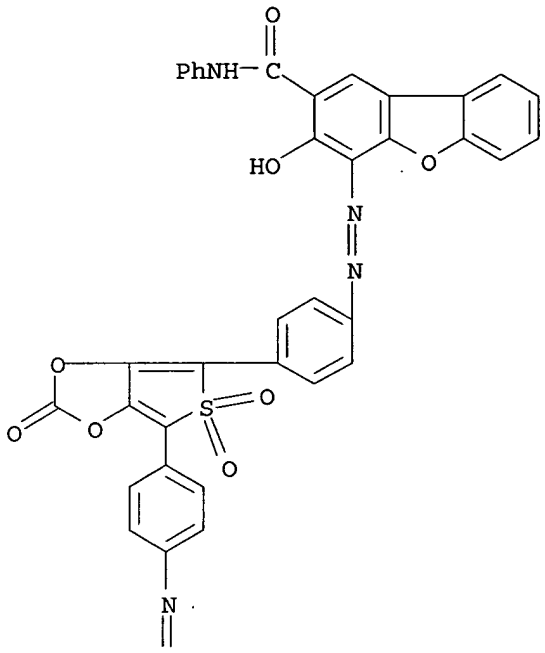
PAGE 1-A



PAGE 1-B

RN 145068-04-8 HCAPLUS
CN 2-Dibenzofurancarboxamide, 4,4'-[(5,5-dioxido-2-oxothieno[3,4-d]-1,3-dioxole-4,6-diyl)bis(4,1-phenyleneazo)]bis[3-hydroxy-N-phenyl- (9CI) (CA INDEX NAME)

PAGE 1-A



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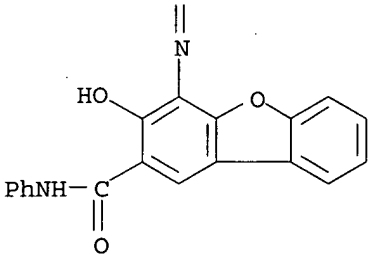

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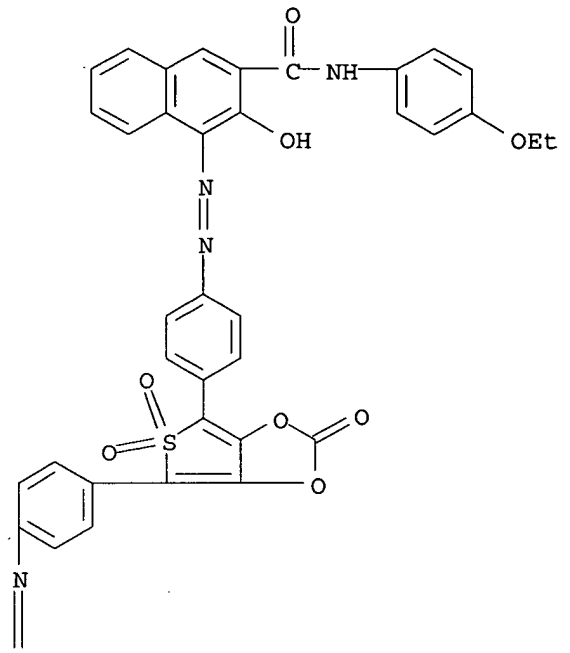
PAGE 1-A



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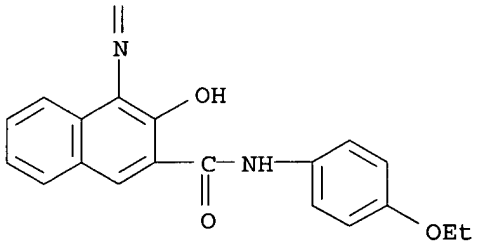

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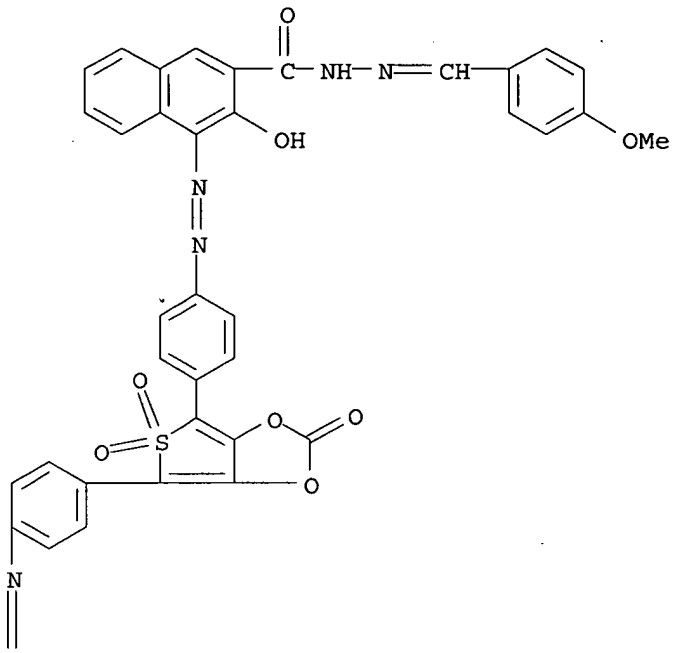
PAGE 1-A



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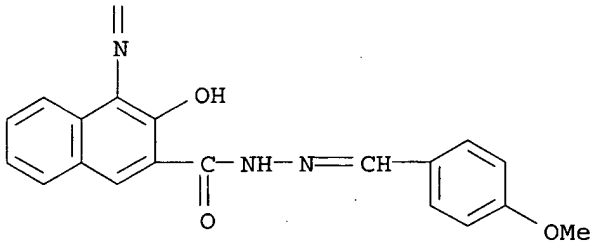

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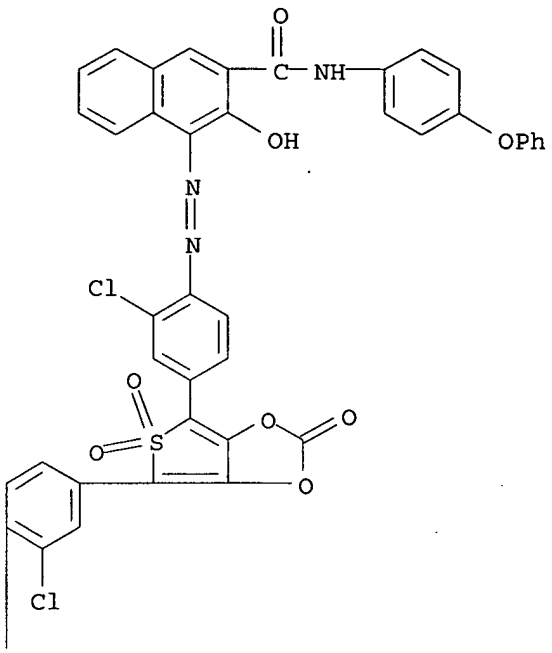
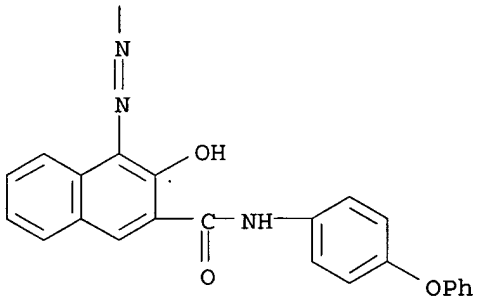
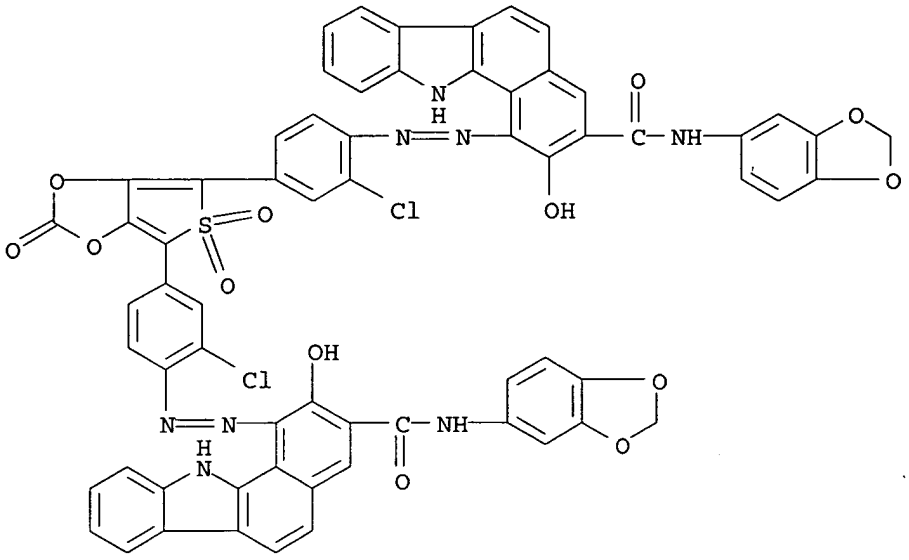
PAGE 1-A



PAGE 2-A

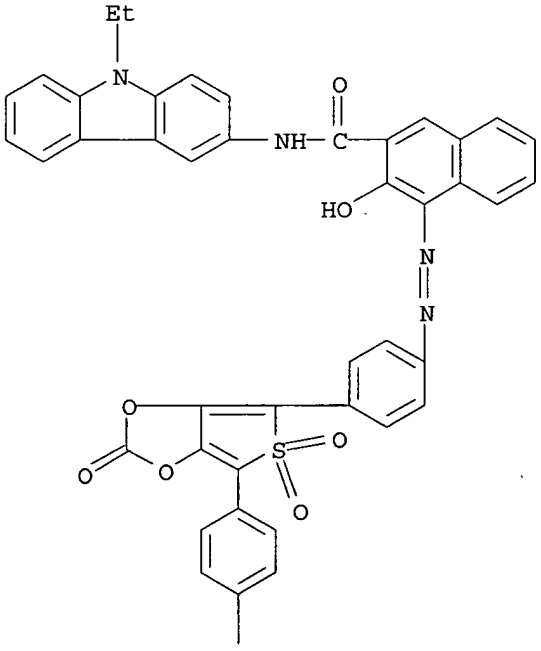


RN 145068-08-2 HCAPLUS
CN 11H-Benzo[a]carbazole-3-carboxamide, 1,1'-[(5,5-dioxido-2-oxothieno[3,4-d]-1,3-dioxole-4,6-diyl)bis[(2-chloro-4,1-phenylene)azo]]bis[N-1,3-benzodioxol-5-yl-2-hydroxy- (9CI) (CA INDEX NAME)



RN 145068-09-3 HCAPLUS
CN 2-Naphthalenecarboxamide, 4,4'-[(5,5-dioxido-2-oxothieno[3,4-d]-1,3-dioxole-4,6-diyl)bis(4,1-phenyleneazo)]bis[N-(9-ethyl-9H-carbazol-3-yl)-3-hydroxy- (9CI) (CA INDEX NAME)

PAGE 1-A



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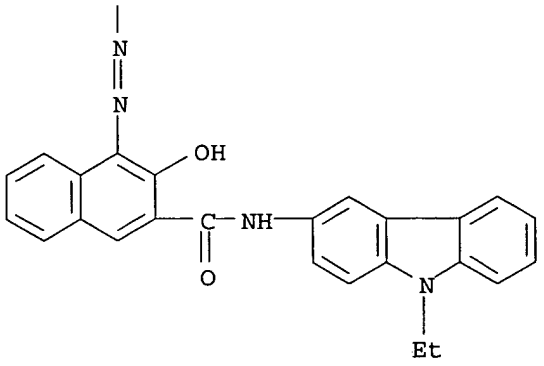
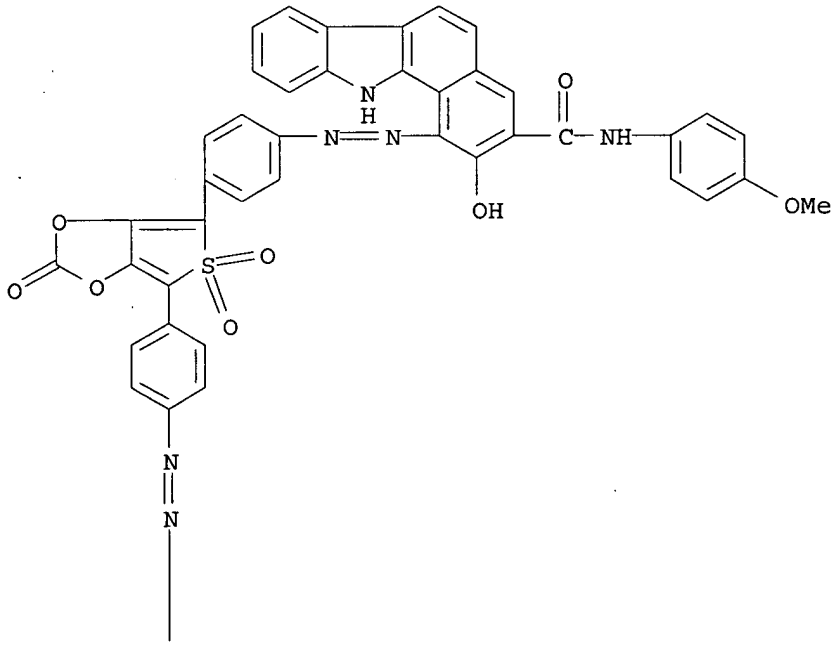


RN 145068-10-6 HCAPLUS
CN 11H-Benzo[a]carbazole-3-carboxamide, 1-[[4-[6-[4-[[3-[[(2,4-dimethylphenyl)amino]carbonyl]-2-hydroxy-1-naphthalenyl]azo]phenyl]-5,5-dioxido-2-oxothieno[3,4-d]-1,3-dioxol-4-yl]phenyl]azo]-2-hydroxy-N-(4-methoxyphenyl)- (9CI) (CA INDEX NAME)

PAGE 1-A



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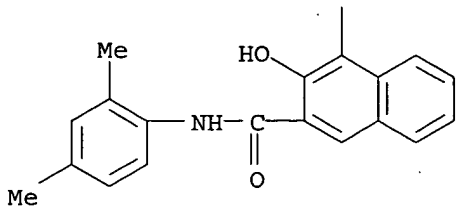
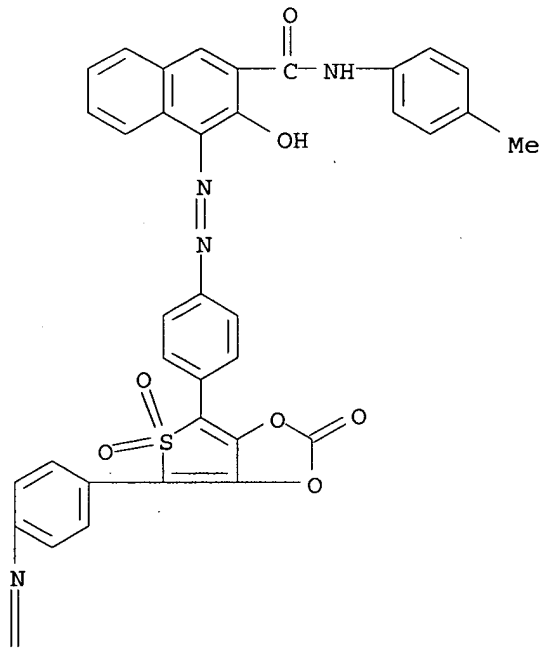


IT **145067-87-4P 145067-88-5P 145067-89-6P**
RL: PREP (Preparation)
(preparation of, for electrophotog photoreceptor)
RN 145067-87-4 HCAPLUS
CN 2-Naphthalenecarboxamide, 4,4'-[(5,5-dioxido-2-oxothieno[3,4-d]-1,3-dioxole-4,6-diyl)bis(4,1-phenyleneazo)]bis[3-hydroxy-N-(4-methylphenyl)-(9CI) (CA INDEX NAME)

PAGE 1-A



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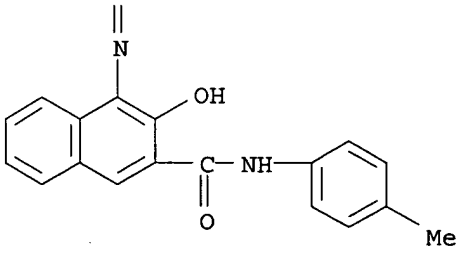
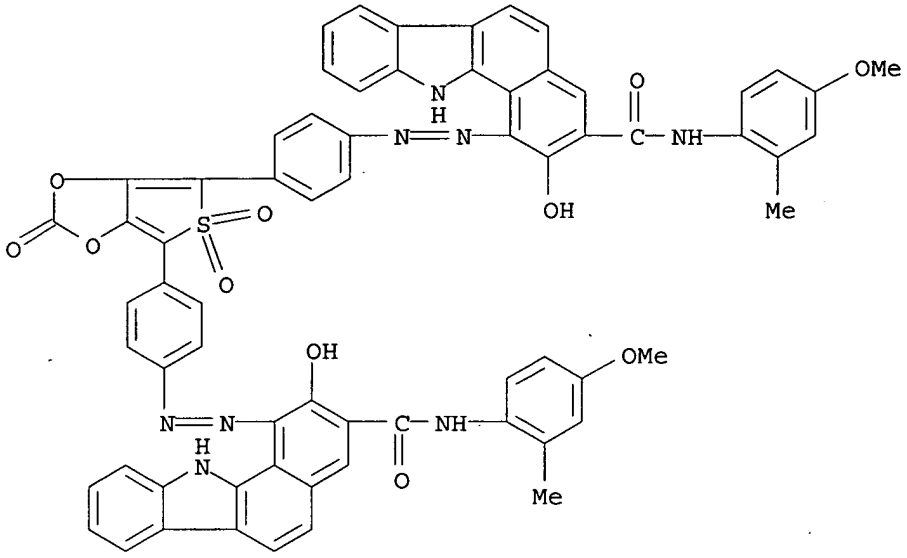


RN 145067-88-5 HCAPLUS
CN 11H-Benzo[a]carbazole-3-carboxamide, 1,1'-[(5,5-dioxido-2-oxothieno[3,4-d]-1,3-dioxole-4,6-diyl)bis(4,1-phenyleneazo)]bis[2-hydroxy-N-(4-methoxy-2-methylphenyl)- (9CI) (CA INDEX NAME)



RN 145067-89-6 HCAPLUS
CN 2-Naphthalenecarboxamide, 3-hydroxy-4-[[4-[6-[4-[(2-hydroxy-7-oxo-7H-benzimidazo[2,1-a]benz[de]isoquinolin-3-yl)azo]-3-methoxyphenyl]-5,5-dioxido-2-oxothieno[3,4-d]-1,3-dioxol-4-yl]-2-methoxyphenyl]azo]-N-phenyl- (9CI) (CA INDEX NAME)

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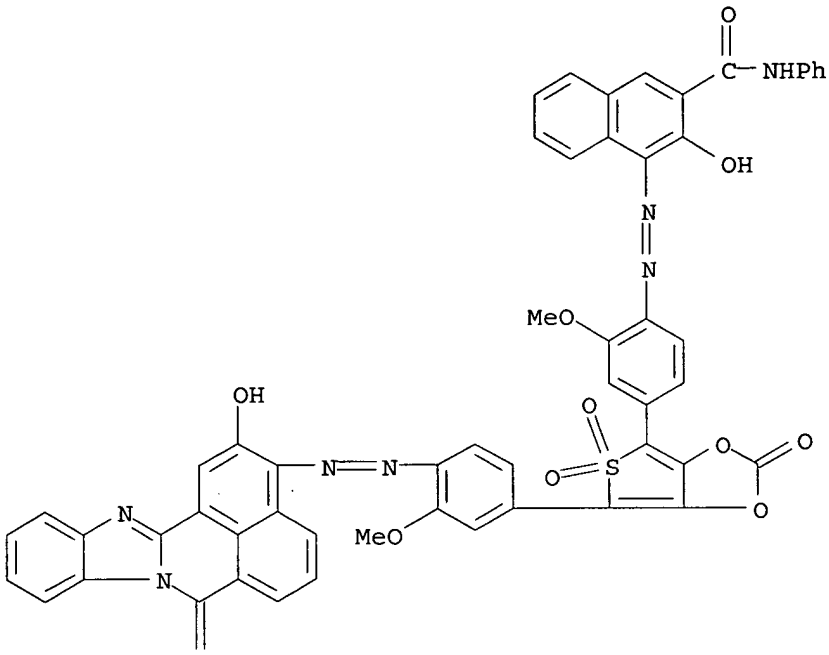


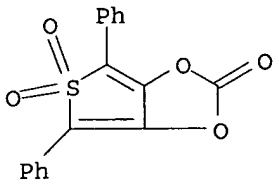
PAGE 2-A

L4 ANSWER 9 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1992:124160 HCAPLUS
DOCUMENT NUMBER: 116:124160
TITLE: Activation of matrices by 4,6-diphenylthieno[3,4-d]-1,3-dioxol-2-one 5,5-dioxide. High-performance liquid affinity chromatographic separations
AUTHOR(S): Hill, Max; Arrio, Bernard
CORPORATE SOURCE: Cent. Orsay, Univ. Paris-Sud, Orsay, 91405, Fr.
SOURCE: Journal of Chromatography (1992), 589(1-2), 101-8
CODEN: JOCRAM; ISSN: 0021-9673
DOCUMENT TYPE: Journal
LANGUAGE: English

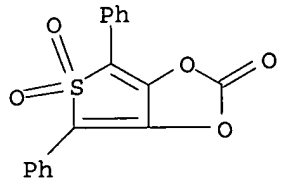
AB High-performance liquid affinity chromatog. requires activated matrixes with specific properties. Standard matrixes were modified and activated and then their characteristics were compared. A new activating method based on the use of 4,6-diphenylthieno[3,4-d]-1,3-dioxol-2-one 5,5-dioxide was developed. The coupling of ligands with these new supports was very fast. The hydrolysis/aminolysis ratio was higher than with N-hydroxysuccinimide-activated matrixes.

IT **54714-11-3**
RL: ANST (Analytical study)
(matrixes activation by, for affinity HPLC)
RN 54714-11-3 HCAPLUS

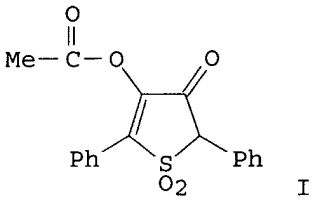
CN Thieno[3,4-d]-1,3-dioxol-2-one, 4,6-diphenyl-, 5,5-dioxide (9CI) (CA INDEX NAME)



L4 ANSWER 10 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1990:552855 HCAPLUS
DOCUMENT NUMBER: 113:152855
TITLE: Synthesis of galactose cluster-containing steroid derivatives
AUTHOR(S): Peter, Martin G.; Boldt, Peter C.; Niederstein, Yvonne; Peter-Katalinic, Jasna
CORPORATE SOURCE: Inst. Org. Chem. Biochem., Univ. Bonn, Bonn, D-5300/1, Germany
SOURCE: Liebigs Annalen der Chemie (1990), (9), 863-9
CODEN: LACHDL; ISSN: 0170-2041
DOCUMENT TYPE: Journal
LANGUAGE: German
OTHER SOURCE(S): CASREACT 113:152855
GI For diagram(s), see printed CA Issue.
AB The synthesis of galactose clusters that are linked to a steroid moiety by a peptide-like spacer unit is described. The galactose cluster is obtained by Koenigs-Knorr glycosylation of (HOCH2)3CNHCOCH2NHFmoc (Fmoc = 9-fluorenylmethoxycarbonyl), under Helferich conditions. Peptide and ester bonds are formed after activation of carboxylic acids as dioxodiphenylthiophene dioxide (TDO) esters. Thus, cholestene derivative I (R1 = Ac, R2 = Ac4Gal, R3 = H, X = CO) is synthesized in a convergent way by coupling the galactose cluster with the cholesteryl active ester. Coupling of the galactose cluster with the cholesteryl derivative II by means of EEDQ yields I (R1 = Ac, R2 = Ac4Gal, R3 = H, X = CONHCH2CO). Reaction of the cluster with 25-hydroxycholesterol leads in a linear sequence to the oxysterol derivative I (R1 = Ac, R2 = Ac4Gal, R3 = OH, X = CO). Selective cleavage of the acetyl groups from galactose units yields the known compound I (R1 = R3 = H, R2 = Gal, X = CO) and the new derivs. I (R1 = R3 = H, R2 = Gal, X = CONHCH2CO) and I (R1 = H, R2 = Gal, R3 = OH, X = CO).
IT **54714-11-3**
RL: RCT (Reactant); RACT (Reactant or reagent)
(esterification by, of succinoylglycopeptide)
RN 54714-11-3 HCAPLUS
CN Thieno[3,4-d]-1,3-dioxol-2-one, 4,6-diphenyl-, 5,5-dioxide (9CI) (CA INDEX NAME)



L4 ANSWER 11 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1990:531481 HCAPLUS
DOCUMENT NUMBER: 113:131481
TITLE: 4-Acyloxy-2,5-diphenyl-3-oxo-2,3-dihydrothiophene 1,1-dioxides as acylating agents in the Friedel-Crafts reaction
AUTHOR(S): Van Ree, Teunis
CORPORATE SOURCE: Dep. Chem., Univ. Venda, Thohoyandou, S. Afr.
SOURCE: South African Journal of Chemistry (1989), 42(4), 139-42
CODEN: SAJCDG; ISSN: 0379-4350
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 113:131481
GI

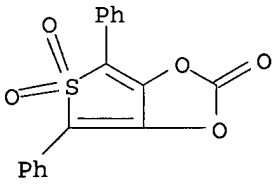


I

AB The title compds., e.g., I, easily accessible from 4,6-diphenylthieno[3,4-d][1,3]dioxol-2-one 5,5-dioxide, is an excellent acylating agent in the Friedel-Crafts reaction with olefins and activated aromatic compds. In the case of the olefins, product mixts. containing β-chloroketones were treated with 1,8-diazabicyclo[5.4.0]undec-7-ene to afford the corresponding unsatd. ketones in 30-73% yields, whereas aromatic ketones were obtained in high yields. The activated esters react slightly faster than the corresponding alkanoyl chlorides, and form fewer byproducts.

IT **54714-11-3**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with carboxylic acids)

RN 54714-11-3 HCAPLUS
CN Thieno[3,4-d]-1,3-dioxol-2-one, 4,6-diphenyl-, 5,5-dioxide (9CI) (CA INDEX NAME)



L4 ANSWER 12 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1988:222117 HCAPLUS
DOCUMENT NUMBER: 108:222117

TITLE: Esters of N-(9-fluorenylmethoxycarbonyl) amino acids with 4-hydroxy-3-oxo-2,5-diphenyl-2,3-dihydrothiophene 1,1-dioxide (Fmoc-amino acid TDO esters) and their use in solid phase peptide synthesis

AUTHOR(S): Kirstgen, Reinhard; Olbrich, Alfred; Rehwinkel, Hartmut; Steglich, Wolfgang

CORPORATE SOURCE: Inst. Org. Chem. Biochem., Univ. Bonn, Bonn, D-5300/1, Fed. Rep. Ger.

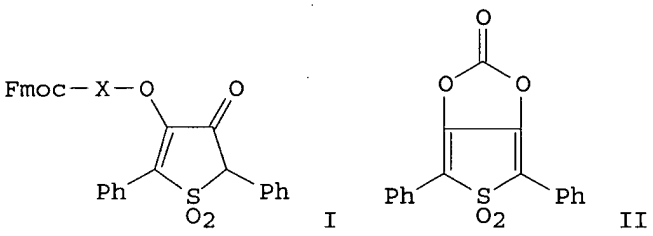
SOURCE: Liebigs Annalen der Chemie (1988), (5), 437-40
CODEN: LACHDL; ISSN: 0170-2041

DOCUMENT TYPE: Journal

LANGUAGE: German

OTHER SOURCE(S): CASREACT 108:222117

GI

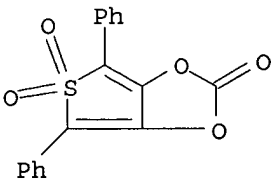


AB Title esters I [Fmoc = 9-fluorenylmethoxycarbonyl; X = Ala, Gly, Asp(OCMe3), Cys(CH2NHAc), Cys(CMe3), His(CPh3), Leu, Lys(CO2CMe3), Phe, Pro, Val, etc.] were prepared by treating Fmoc-X-OH with cyclic carbonate II in CH2Cl2 containing pyridine. The above esters were used in the synthesis of H-Leu-Ala-Val-Gly-OH by the solid-phase method on a p-alkoxybenzyl alc. resin.

IT **54714-11-3**
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation reaction of, with fluorenylmethoxycarbonyl amino acids)

RN 54714-11-3 HCAPLUS

CN Thieno[3,4-d]-1,3-dioxol-2-one, 4,6-diphenyl-, 5,5-dioxide (9CI) (CA INDEX NAME)



L4 ANSWER 13 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1988:150017 HCAPLUS

DOCUMENT NUMBER: 108:150017

TITLE: One-pot synthesis of N-(alkoxy)arylglyoxylic acid amides with the Steglich reagent

AUTHOR(S): Geffken, Detlef; Groll, Georg; Gleixner, Ralf

CORPORATE SOURCE: Pharm. Inst., Univ. Bonn, Bonn, D-5300, Fed. Rep. Ger.

SOURCE: Chemiker-Zeitung (1987), 111(7-8), 245-6

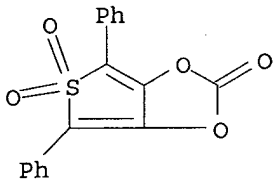
CODEN: CMKZAT; ISSN: 0009-2894
DOCUMENT TYPE: Journal
LANGUAGE: German
OTHER SOURCE(S): CASREACT 108:150017

AB Steglich-reagent (4,6-diphenylthieno-[3,4-d]-1,3-dioxole-2-one 5,5-dioxide) activated amidation of arrylglycoxylic acids, RCOCO2H (R = Ph, 4-ClC6H4, 2-thienyl, 3-thienyl, 5-chloro-2-thienyl, 2,5-dimethyl-3-thienyl, 5-phenyl-2-thienyl), with O-alkylhydroxylamines, H2NOR1 (R1 = CH2Ph, tetrahydropyranyl, CHMe2), gave 72-90% title compds., RCOCONHOR1.

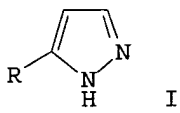
IT **54714-11-3**
RL: RCT (Reactant); RACT (Reactant or reagent)
(activation of carboxy function of arylglyoxylic acids by, for amidation with alkylhydroxyamines)

RN 54714-11-3 HCAPLUS

CN Thieno[3,4-d]-1,3-dioxol-2-one, 4,6-diphenyl-, 5,5-dioxide (9CI) (CA INDEX NAME)



L4 ANSWER 14 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1987:459395 HCAPLUS
DOCUMENT NUMBER: 107:59395
TITLE: Chain elongation of carbohydrates: synthesis of pyrazoles from optically active carboxylic acids
AUTHOR(S): Klein, Ulrich; Mohrs, Klaus; Wild, Hanno; Steglich, Wolfgang
CORPORATE SOURCE: Inst. Org. Chem. Biochem., Univ. Bonn, Bonn, D-5300/1, Fed. Rep. Ger.
SOURCE: Liebigs Annalen der Chemie (1987), (6), 485-9
CODEN: LACHDL; ISSN: 0170-2041
DOCUMENT TYPE: Journal
LANGUAGE: German
OTHER SOURCE(S): CASREACT 107:59395
GI



I

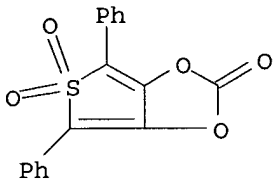
AB Pyrazoles I [R = 1,2,3,4,5-pentahydroxy-β-D-gluco-pentyl, β-L-lyxopyranosyl, 3-(β-D-glucopyranosyloxy)-1,2,4,5-tetrahydroxy-D-gluco-pentyl, (4S,5S)-2,2,5-trimethyl-1,3-dioxolan-4-yl, (4S,5S)-2,2-dimethyl-1,3-dioxolan-4,5-diyl, 4-ClC6lH4] were prepared from

RCO2H by amidation with H2NCHPhCO2CH2CH:CMe2, ozonolysis of RCONHCHPhCO2CH2CH:CMe2, and cyclization with N2H4. Thus, unprotected C-nucleosides are obtained from glyconic acids.

IT **54714-11-3**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with optically active carboxylic acids)

RN 54714-11-3 HCAPLUS

CN Thieno[3,4-d]-1,3-dioxol-2-one, 4,6-diphenyl-, 5,5-dioxide (9CI) (CA INDEX NAME)



L4 ANSWER 15 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1987:85260 HCAPLUS

DOCUMENT NUMBER: 106:85260

TITLE: Aromatic polymers containing heterocyclic terminal groups

INVENTOR(S): Tyrell, John Alfred; Freimiller, Gary Lee

PATENT ASSIGNEE(S): General Electric Co., USA

SOURCE: Eur. Pat. Appl., 33 pp.
CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

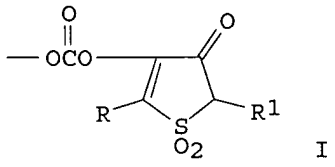
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 176008	A1	19860402	EP 1985-111518	19850912
R: DE, FR, GB, IT, NL				
US 4595733	A	19860617	US 1984-650866	19840914
JP 61087725	A2	19860506	JP 1985-201883	19850913

PRIORITY APPLN. INFO.: US 1984-650866 A 19840914

GI



I

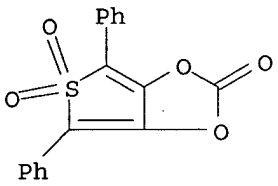
AB Aromatic polymers contain ≥1 terminal group of the formula I (R, R1 = H, hydrocarbon radical). For example, 1500 g bisphenol A polycarbonate partially end-capped with a conventional phenol end-capping agent was blended with 8 g 4,6-diphenylthieno[3,4-d][1,3]dioxol-2-one 5,5-dioxide. After extrusion and heating at 250° for 16 h, the free OH content

was 46 ppm and the intrinsic viscosity (CH2Cl2, 25°) was 0.472 dL/g.

IT **54714-11-3**
RL: USES (Uses)
(stabilization of hydroxy-terminated aromatic polymers by reaction with)

RN 54714-11-3 HCAPLUS

CN Thieno[3,4-d]-1,3-dioxol-2-one, 4,6-diphenyl-, 5,5-dioxide (9CI) (CA INDEX NAME)



L4 ANSWER 16 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1986:534258 HCAPLUS

DOCUMENT NUMBER: 105:134258

TITLE: Chain elongation of carbohydrates via the C-phenylglycine method

AUTHOR(S): Wild, Hanno; Mohrs, Klaus; Niewoehner, Ulrich; Steglich, Wolfgang

CORPORATE SOURCE: Inst. Org. Chem. Biochem., Univ. Bonn, Bonn, D-5300/1, Fed. Rep. Ger.

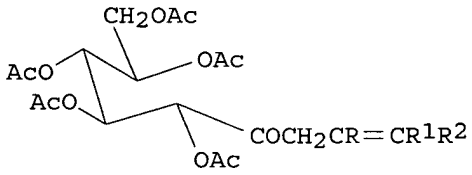
SOURCE: Liebigs Annalen der Chemie (1986), (9), 1548-67
CODEN: LACHDL; ISSN: 0170-2041

DOCUMENT TYPE: Journal

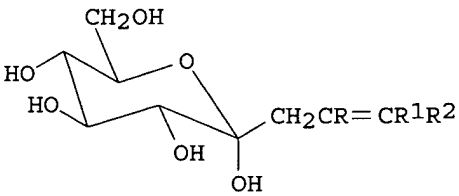
LANGUAGE: German

OTHER SOURCE(S): CASREACT 105:134258

GI



I



II

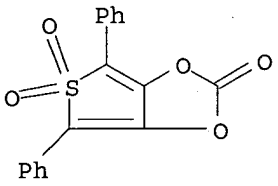
AB The C-phenylglycine method was used for chain elongation of peracetylated glyconic and glycuronic acids by the attachment of an allyl residue. The reaction sequence led to β,γ-unsatd. ketones I (R, R1, R2 = H,

Me, Ph, Cl, geranyl, farnesyl, solanesyl), which may be converted to ketoses II by cleavage of the protecting groups. This technique permitted the formal replacement of a H atom at the anomeric center of a hexopyranose by a substituted allyl residue.

IT **54714-11-3**
RL: RCT (Reactant); RACT (Reactant or reagent)
(decarbonylation of)

RN 54714-11-3 HCAPLUS

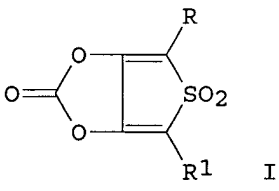
CN Thieno[3,4-d]-1,3-dioxol-2-one, 4,6-diphenyl-, 5,5-dioxide (9CI) (CA INDEX NAME)



L4 ANSWER 17 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1986:444075 HCAPLUS
DOCUMENT NUMBER: 105:44075
TITLE: Hydrolytically stabilized polycarbonates
INVENTOR(S): Tyrell, John A.; Freimiller, Gary L.
PATENT ASSIGNEE(S): General Motors Corp., USA
SOURCE: U.S., 7 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4576982	A	19860318	US 1984-650427	19840914
EP 177792	A1	19860416	EP 1985-111519	19850912
R: DE, FR, GB, IT, NL				
JP 61087751	A2	19860506	JP 1985-201884	19850913
PRIORITY APPLN. INFO.:			US 1984-650427 A	19840914

GI



I

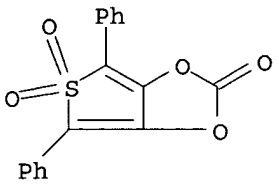
AB The hydrolytic stability of polycarbonates is improved by addition of the cyclic carbonates I (R, R1 = H, hydrocarbyl, or hydrocarbyloxy). Thus, the change in Kasha Index (related to intrinsic viscosity) of 1500 g bisphenol A polycarbonate containing 8 g I (R, R1 = Ph) after 18 h at

250° F in 15 psig steam was 1160, compared with 1870 without I.

IT **54714-11-3**
RL: USES (Uses)
(hydrolysis inhibitors, for polycarbonates)

RN 54714-11-3 HCAPLUS

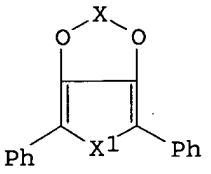
CN Thieno[3,4-d]-1,3-dioxol-2-one, 4,6-diphenyl-, 5,5-dioxide (9CI) (CA INDEX NAME)



L4 ANSWER 18 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1982:218227 HCAPLUS
DOCUMENT NUMBER: 96:218227
TITLE: Polymeric activated esters of 3,4-dihydroxy-2,5-diphenylthiophene 1,1-di-oxide
INVENTOR(S): Steglich, Wolfgang; Hollitzer, Oswald; Seewald, Alfred
PATENT ASSIGNEE(S): BASF A.-G. , Fed. Rep. Ger.
SOURCE: Can., 50 pp. Division of Can. Appl. No. 279,418.
CODEN: CAXXA4
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
CA 1110385	A2	19811006	CA 1980-359156		19800827
DE 2625539	A1	19771222	DE 1976-2625539		19760605
DE 2625539	C2	19821104			
CA 1106388	A1	19810804	CA 1977-279418		19770530
PRIORITY APPLN. INFO.:			DE 1976-2625539	A	19760605
			CA 1977-279418	A3	19770530

GI



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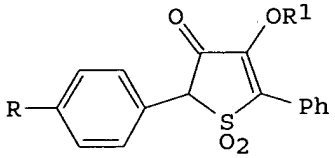
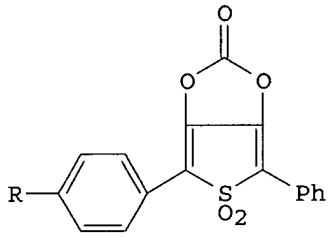


II



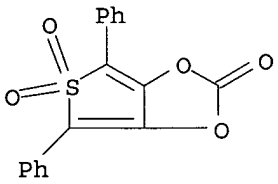
III

AB Heterocyclic compds. I (X = CO, CS, COCO; X1 = SO2, CO) bound to polymers via the Ph group were prepared as reagents for the synthesis of peptides and amides. Thus, chloromethylated Merrifield resin (resin-C6H4CH2Cl) was treated with PhCH2SH to give resin-C6H4CH2SCH2Ph, which was oxidized by H2O2 to give resin-C6H4CH2SO2CH2Ph, which was cyclized with (CO2Et)2 in EtOH containing Na to give thiophene II (R = resin, R1 = H), which was esterified with COCl2 to give cyclic carbonate III (R = resin) (IV). IV was treated with Z-Val-OH (Z = PhCH2O2C) to give active ester II (R = resin, R1 = Z-Val), which was coupled with H-Val-OMe to give Z-Val-Val-OMe. II (R = R1 = H) was esterified with COCl2 to give III (R = H), which was treated with N-protected amino acids, e.g. Me3CO2C-Pro-OH, to give the corresponding active esters, e.g. II (R = H, R1 = Me3CO2C-Pro). The latter active esters were used in a series of peptide couplings in solution

IT **54714-11-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, with acids and alcs. and amines)

RN 54714-11-3 HCAPLUS

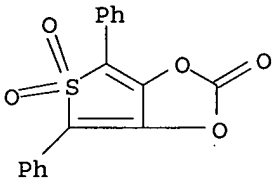
CN Thieno[3,4-d]-1,3-dioxol-2-one, 4,6-diphenyl-, 5,5-dioxide (9CI) (CA INDEX NAME)



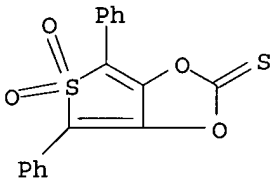
IT **54714-11-3DP**, resin-bound
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, with protected amino acids)

RN 54714-11-3 HCAPLUS

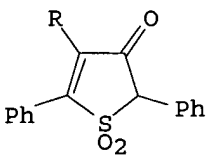
CN Thieno[3,4-d]-1,3-dioxol-2-one, 4,6-diphenyl-, 5,5-dioxide (9CI) (CA INDEX NAME)



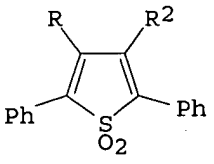
IT **67106-15-4P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 67106-15-4 HCAPLUS
CN Thieno[3,4-d]-1,3-dioxole-2-thione, 4,6-diphenyl-, 5,5-dioxide (9CI) (CA INDEX NAME)



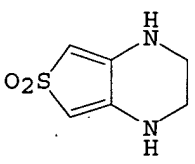
L4 ANSWER 19 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1980:407924 HCAPLUS
DOCUMENT NUMBER: 93:7924
TITLE: New condensation reactions of 4-hydroxy-3-oxo-2,5-diphenyl-2,3-dihydrothiophene 1,1-dioxide
AUTHOR(S): Ried, Walter; Bellinger, Oswald; Oremek, Gerhard
CORPORATE SOURCE: Inst. Org. Chem., Univ. Frankfurt, Frankfurt/Main, D-6000/70, Fed. Rep. Ger.
SOURCE: Chemische Berichte (1980), 113(2), 750-6
CODEN: CHBEAM; ISSN: 0009-2940
DOCUMENT TYPE: Journal
LANGUAGE: German
OTHER SOURCE(S): CASREACT 93:7924
GI



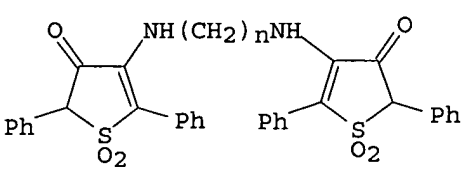
I



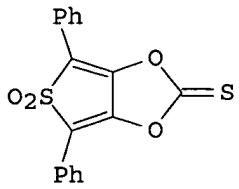
III



V



VI



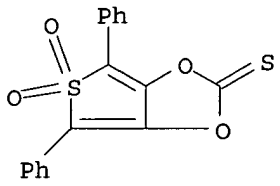
VII

AB The title compound reacted as the tautomeric form I (R = OH)(II) with primary amines to give I (R = R1NH; R1 = cyclohexyl, substituted Ph) or III (R = R1NH, R2 = O- RN+H3), depending on their basicity, whereas H2N(CH2)nNH2 (IV; n = 2) gave the cyclization product V and IV (n = 3, 4, 6) gave the bridged compds. VI. (H2N)2CH2 reacted with II to give I (R = NH2). Reaction of II with hydrazines gave the corresponding monohydrazones. Acid chlorides reacted with II to give I (R = AcO, tosyloxy) or III (R = R2 = tosyloxy), whereas CSCl2 gave VII. Reaction of II with trialkyl phosphite gave I (R = OMe, OEt).

IT **67106-15-4P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 67106-15-4 HCAPLUS

CN Thieno[3,4-d]-1,3-dioxole-2-thione, 4,6-diphenyl-, 5,5-dioxide (9CI) (CA INDEX NAME)



L4 ANSWER 20 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1979:439805 HCAPLUS

DOCUMENT NUMBER: 91:39805

TITLE: Activated carboxylic acid derivatives. 4. Economic synthesis of activated N-tert-butyloxycarbonylamino acid esters

AUTHOR(S): Schnorrenberg, Gerd; Steglich, Wolfgang

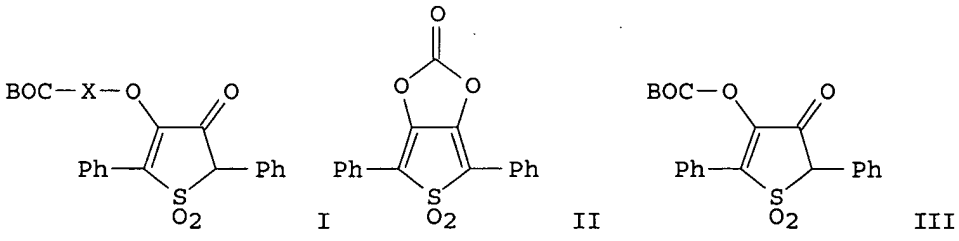
CORPORATE SOURCE: Inst. Org. Chem. Biochem., Univ. Bonn, Bonn, Fed. Rep. Ger.

SOURCE: Angewandte Chemie (1979), 91(4), 326-7
CODEN: ANCEAD; ISSN: 0044-8249

DOCUMENT TYPE: Journal

LANGUAGE: German

GI



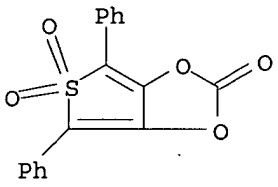
AB Amino acid active esters I [BOC = Me3CO2C; X = Ala, Cys(CH2Ph), Gly, Leu, Phe, Pro, Ser(CH2Ph), Trp, Val] were prepared in 72 - 92% yields by treating

thieno[3,4-d][1,3]dioxole II with HOCMe3, treating the resulting carbonate III with the appropriate amino acid, and esterifying the resulting BOC amino acid with II. I can be used in peptide coupling reactions.

IT **54714-11-3**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with alcs.)

RN 54714-11-3 HCAPLUS

CN Thieno[3,4-d]-1,3-dioxol-2-one, 4,6-diphenyl-, 5,5-dioxide (9CI) (CA INDEX NAME)



L4 ANSWER 21 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1979:152577 HCAPLUS

DOCUMENT NUMBER: 90:152577

TITLE: Activated carboxylic acid derivatives, III. Convenient synthesis of ureas, urethanes and isocyanates

AUTHOR(S): Schmidt, Harald; Hollitzer, Oswald; Seewald, Alfred; Steglich, Wolfgang

CORPORATE SOURCE: Inst. Org. Chem. Biochem., Univ. Bonn, Bonn, Fed. Rep. Ger.

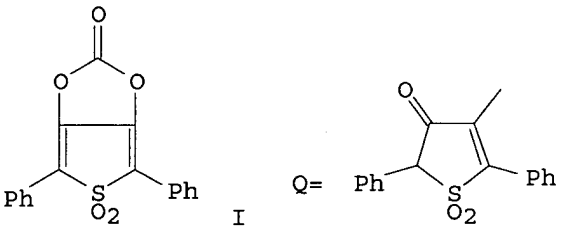
SOURCE: Chemische Berichte (1979), 112(2), 727-33
CODEN: CHBEAM; ISSN: 0009-2940

DOCUMENT TYPE: Journal

LANGUAGE: German

OTHER SOURCE(S): CASREACT 90:152577

GI



AB The cyclic carbonate I is used for as reagent for the preparation of ureas, urethanes, and isocyanates. Thus, treatment of I with RR1NH [R = CH2Ph, Ph, CHMeCO2Me-(S), CH(CHMe2)CO2Me-(S), CH(CH2CHMe2)CO2Et-(S), R1 = H; R = R1 = Et, cyclohexyl, CH2Ph, Ph; NRR1 = piperido, morpholino] gave QO2CNRR1, which on amination gave RNHCONR2R3 [R = CH2Ph, Ph, CHMeCO2Me-(S); R2 = CH2Ph, Ph, CHMeCO2Me-(S), R3 = H; R2 = R3 = Et; NR2R3 = piperidino, morpholino]. Thermal decomposition of QO2CNHR gave RNCO and QOH. Reaction of I with R4OH (R4 = Et, CH2CHMe2, CMe3, 5-cholesten-3-yl, Ph) gave QOCO2R4, which was aminated with R4O2CNR5R6 (R5 = CH2Ph, Ph, R6 = H;

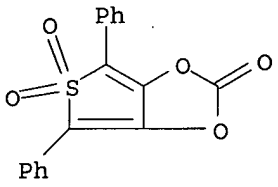
R5 = R6 = Et).

IT **54714-11-3**

RL: RCT (Reactant); RACT (Reactant or reagent)
(as reagent for urea and urethane and isocyanate synthesis)

RN 54714-11-3 HCAPLUS

CN Thieno[3,4-d]-1,3-dioxol-2-one, 4,6-diphenyl-, 5,5-dioxide (9CI) (CA INDEX NAME)



L4 ANSWER 22 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1978:614864 HCAPLUS

DOCUMENT NUMBER: 89:214864

TITLE: Activated carboxylic acid derivatives. II. A simple synthesis of 2-oxocarboxylic acid amides, N-(2-oxoacyl)amino acid esters and 2-oxocarboxylic acid hydrazides

AUTHOR(S): Steglich, Wolfgang; Schmidt, Harald; Hollitzer, Oswald

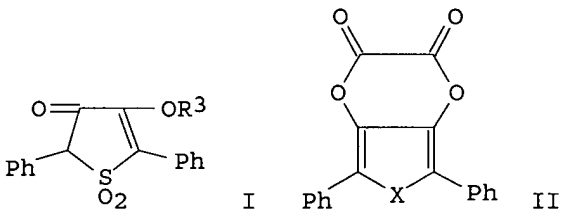
CORPORATE SOURCE: Inst. Org. Chem. Biochem., Univ. Bonn, Bonn, Fed. Rep. Ger.

SOURCE: Synthesis (1978), (8), 622-4
CODEN: SYNTBF; ISSN: 0039-7881

DOCUMENT TYPE: Journal

LANGUAGE: German

GI

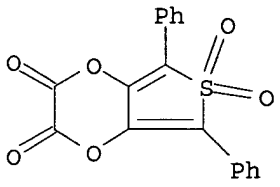


AB Oxocarboxamides RCOCONR1R2 [R = Me, Et, Ph, CH2Ph; R1 = CH2Ph, CHMeCO2Me, CH(CHMe2)CO2Me, CH(CO2H)CH2CHMe2, CH2CO2Et, NHPh, NHC6H3(NO2)2-2,4, R2 = H; R1 = R2 = Et; R1R2 = (CH2)5, CH(CO2Me)(CH2)3; R1 = Me, R2 = CH2CO2Me] were prepared by treating the sulfone I (R3 = H) with oxalyl chloride to give II (X = SO2) which was treated with RCOCO2H in the presence of pyridine to give I (R3 = COCOR). Treating of I (R3 = COCOR) with R1R2NH gave RCOCONR1R2. II (X = CO) could also be used for the preparation of RCOCONR1R2.

IT **67106-13-2P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

(Reactant or reagent)
(preparation and reaction of, with oxoalkanoic acids)
RN 67106-13-2 HCAPLUS
CN Thieno[3,4-b]-1,4-dioxin-2,3-dione, 5,7-diphenyl-, 6,6-dioxide (9CI) (CA INDEX NAME)

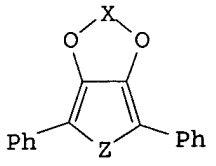


L4 ANSWER 23 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1978:444240 HCAPLUS
DOCUMENT NUMBER: 89:44240
TITLE: Cyclic esters of 3,4-dihydroxythiophene-1,1 dioxide and 3,4-dihydroxycyclopentadienone compounds
INVENTOR(S): Steglich, Wolfgang; Hollitzer, Oswald; Seewald, Alfred
PATENT ASSIGNEE(S): BASF A.-G., Fed. Rep. Ger.
SOURCE: Ger. Offen., 27 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

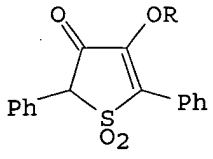
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2625539	A1	19771222	DE 1976-2625539	19760605
DE 2625539	C2	19821104		
CA 1106388	A1	19810804	CA 1977-279418	19770530
GB 1578963	A	19801112	GB 1977-23381	19770602
CH 636877	A	19830630	CH 1977-6801	19770602
FR 2353555	A1	19771230	FR 1977-16987	19770603
FR 2353555	B1	19821231		
CA 1110385	A2	19811006	CA 1980-359156	19800827

PRIORITY APPLN. INFO.: DE 1976-2625539 A 19760605
CA 1977-279418 A3 19770530

GI



I



II

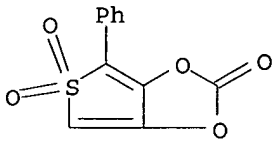
AB The esters I (X = CO, CS, COCO; Z = SO2, CO) were prepared as intermediates for active esters in peptide synthesis. Thus, thiophene II (R = H) was treated with COCl2 in THF in an autoclave for 24 h at 80° to give I (X = CO, Z = SO2) (III). III was treated with BOC-Phe-OH (BOC = Me3CO2C)

and pyridine in CH2Cl2 for 2 h to give active ester II (R = BOC-Phe) which was treated with H-Val-OMe to give 93% BOC-Phe-Val-OMe. The use of I as active esters in solid-phase peptide synthesis on polystyrene resins is presented.

IT **67106-18-7DP**, polystyrene-bound
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, with amino acid derivative)

RN 67106-18-7 HCAPLUS

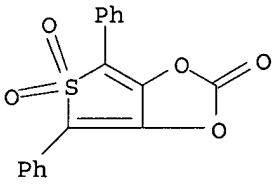
CN Thieno[3,4-d]-1,3-dioxol-2-one, 4-phenyl-, 5,5-dioxide (9CI) (CA INDEX NAME)



IT **54714-11-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, with amino acid derivs., active esters from)

RN 54714-11-3 HCAPLUS

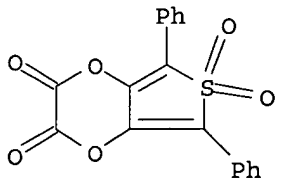
CN Thieno[3,4-d]-1,3-dioxol-2-one, 4,6-diphenyl-, 5,5-dioxide (9CI) (CA INDEX NAME)



IT **67106-13-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, with dibenzylamine)

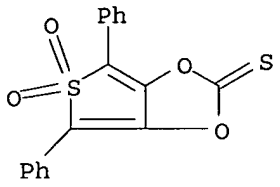
RN 67106-13-2 HCAPLUS

CN Thieno[3,4-b]-1,4-dioxin-2,3-dione, 5,7-diphenyl-, 6,6-dioxide (9CI) (CA INDEX NAME)

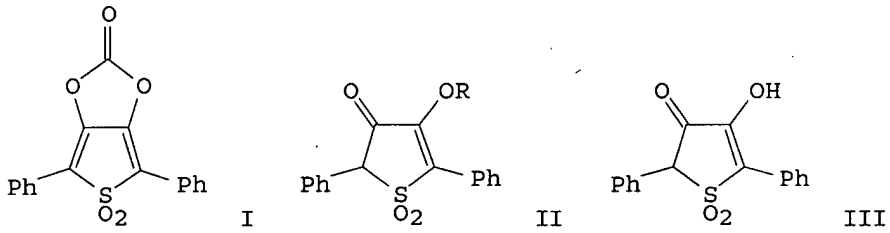


IT **67106-15-4P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 67106-15-4 HCAPLUS
CN Thieno[3,4-d]-1,3-dioxole-2-thione, 4,6-diphenyl-, 5,5-dioxide (9CI) (CA INDEX NAME)



L4 ANSWER 24 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1977:5825 HCAPLUS
DOCUMENT NUMBER: 86:5825
TITLE: 4,6-Diphenylthieno[3,4-d][1,3]dioxol-2-one-5,5-dioxide, a new type of activating agent for peptide syntheses
AUTHOR(S): Hollitzer, Oswald; Seewald, Alfred; Steglich, Wolfgang
CORPORATE SOURCE: Org.-Chem. Inst., Tech. Univ. Berlin, Berlin, Fed. Rep. Ger.
SOURCE: Angewandte Chemie (1976), 88(14), 480-1
CODEN: ANCEAD; ISSN: 0044-8249
DOCUMENT TYPE: Journal
LANGUAGE: German
OTHER SOURCE(S): CASREACT 86:5825
GI

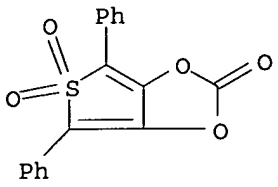


I II III

AB The title compound (I) was a more efficient acyl transfer agent in peptide synthesis than nitrophenyl esters. Thus ROH (R = PhCH2O2C-Val, PhCH2O2C-Pro, Me3CO2C-Pro, Me3CO2C-Phe, Me3CO2C-Met) reacted with I to give active esters II which reacted with R1NH2 (R1NH = Val-OMe, Val-OCMe3, Ala-OMe) to give RNHR1. I was prepared by treating the thiazolinone III with COCl2.

IT **54714-11-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction with acylamino acids)

RN 54714-11-3 HCAPLUS
CN Thieno[3,4-d]-1,3-dioxol-2-one, 4,6-diphenyl-, 5,5-dioxide (9CI) (CA INDEX NAME)



L4 ANSWER 25 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1975:170766 HCAPLUS
DOCUMENT NUMBER: 82:170766
TITLE: Methylenedioxyhetarenes. 1. Preparation of 3.4-methylenedioxythiophene, -furan, and -pyrrole derivatives
AUTHOR(S): Dallacker, Franz; Mues, Volker
CORPORATE SOURCE: Inst. Org. Chem., Tech. Hochsch. Aachen, Aachen, Fed. Rep. Ger.
SOURCE: Chemische Berichte (1975), 108(2), 569-75
CODEN: CHBEAM; ISSN: 0009-2940
DOCUMENT TYPE: Journal
LANGUAGE: German
OTHER SOURCE(S): CASREACT 82:170766
GI For diagram(s), see printed CA Issue.
AB Methylenation of the ester I (X = S, R = R1 = H) with BrClCH2 in the presence of K2CO3 in DMF gave I (X = S and SO2, RR1 = CH2) and the derivative II (X = S), whereas from I (X = O, R = R1 = H) and I (X = NPh, R = R1 = H) only the corresponding II were obtained.
IT **55932-08-6P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 55932-08-6 HCAPLUS
CN Thieno[3,4-d]-1,3-dioxole-4,6-dicarboxylic acid, diethyl ester, 5,5-dioxide (9CI) (CA INDEX NAME)